



THE CALIFORNIA VETERINARIAN

**MIDWINTER
CONFERENCE**

DAVIS

February 1, 2, 3, 1960

**JANUARY-DECEMBER
1959**

PUBLISHED BY CALIFORNIA VETERINARY MEDICAL ASSOCIATION

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☒ Canine ☐ Feline ☐ Equine

Specie: Canine
Breed: English Cocker
Sex: Male
Age: 35 lbs.
Weight:
Histo:

Symptoms: Vomiting and diarrhea (bloody), anorexia
 Diagnosis: Gastroenteritis
 Treatment: DIATHAL 2 cc. i.m.
 Results: Vomiting and diarrhea stopped promptly -
 e. given 2nd day; appetite returned, fed
 and beef; on 3rd day normal stool, normal
 ite.

Note excellent results reported
 by our investigators with
 DIATHAL. We now have
 more than 500 reports in;
 well over 90% are favorable.

*This report refers about 25
 Cases treated as outpatients.*

Similar cases starting with vomiting & diarrhea
 may also be enteritis, where complete and loose
 stools (mucous) (from bacteria in water). Because
 loss of time and weight I usually give each dog
 1 cc. of DIATHAL i.m. While I did not have the
 opportunity to check every case as a follow-up,
 I had telephone reports on most and the results
 were almost universally good. Also, the number of
 loose stools usually decreased to 2 or 3 in
 24 hours. I had no complaint of any toxic or
 allergic reactions.

*I am convinced that one cc. of this
 drug is sufficient to control most simple
 gastroenteritis.*

Due to consistently good results...
 Veterinary Diets have now been...
 advised - has received most...
 indicated in these cases...

*Mr. L. Brown, D.V.M.
 Veterinary Medicine Dept.
 Auburn University
 Auburn, Ala.*

packaging: DIATHAL Injection, 10 cc. vial, boxes of 1 and 6.
 DIATHAL® procaine penicillin G in dihydrostreptomycin sulfate solution with diphenhydramine.

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 in cats, dogs and horses

- potent anticholinergic blocking action
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DIATHAL
 Injection

10 cc. vial,
 in G is dihydro-
 with diphenhydramine

Case B-752-58-13

Canine - Mixed Collie
Male - 4 years
Weight - 45 lbs.
History - Vomiting and diarrhea for 3 days
Exposure - Same as above
Diagnosis - Gastroenteritis
Treatment - DIATHAL 2 cc. i.m.

Results - Dog quit vomiting in four hours - diarrhea
 stopped in six hours. Uneventful recovery.
 This new preparation is much easier to handle
 and work with than previous - such better
 response.

MISCELLANEOUS

FELINE

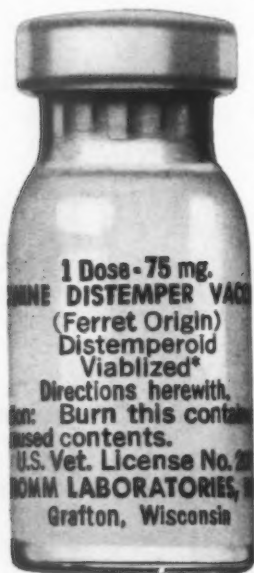
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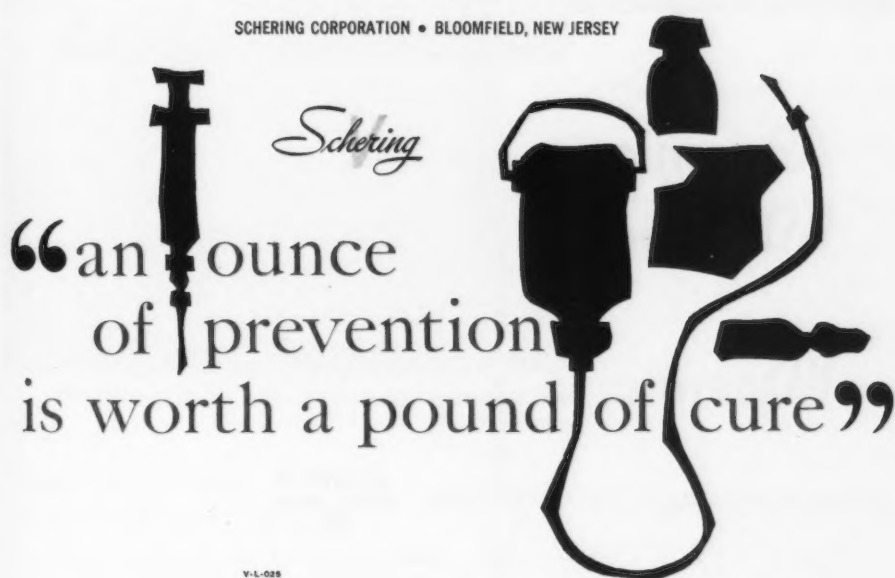
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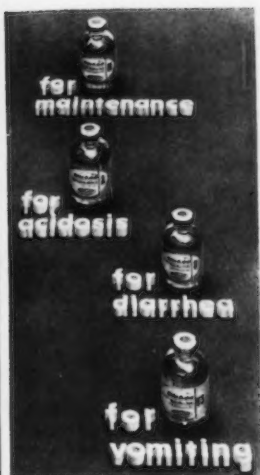
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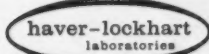
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- ☐ Baby Pig booklet (send supply)

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1. Harris, J.R., and Clarkson, T.B., Prevention of Relapses in Milk Fever, Vet. Medicine, 12:696 (Dec. 1955)

Write for detailed literature.



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THE CALIFORNIA VETERINARIAN

NOVEMBER-DECEMBER, 1959

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No. 2

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Midwinter Conference Speakers



GEN. WAYNE O. KESTER
Retired Chief, Air Force Vet. Corps, and former president, AVMA, General Kester is now a director, Morris Animal Foundation, Denver.



SAMUEL F. SCHEIDY
President, AVMA, Dr. Scheidy will make a key talk at the Midwinter Conference. His subject: "Why Stand Alone?" An able speaker, he has made talks before veterinary gatherings throughout the U. S. and abroad.



GEORGE R. BURCH
Dr. Burch is director of the Pitman-Moore Research Farm, and has been in charge of veterinary pharmaceutical clinical research since 1948.



SEYMOUR R. ROBERTS
A Richmond practitioner, Dr. Roberts will talk on the lacrimal apparatus of the dog.



PHILIP L. McCLAVE
Dr. McClave, of Reseda, will appear at a clinical pathology conference at the Midwinter Conference.

Closed Circuit TV to be Sponsored by PITMAN-MOORE COMPANY

Division of Allied Laboratories, Indianapolis

For the fourth consecutive year, Pitman-Moore Company will sponsor closed circuit Television at the Midwinter Conference.

An excellent program of large and small animal demonstrations is planned with Drs. G. D. Pettit and J. W. Kendrick as Moderators.

The use of the large screen, inaugurated last year, will again bring operating techniques directly before you. Don't miss the closed circuit portion of the Midwinter meeting!

PROGRAM

CALIFORNIA VETERINARY MEDICAL ASSOCIATION MIDWINTER CONFERENCE

PROGRAM COMMITTEE: *Chairman*, R. L. Collinson; *Co-Chairman*, Charles E. Cornelius; Stuart M. Foster, Peter C. Enge, Donald E. Jasper, Philip L. McClave, Blaine McGowan, Ghery D. Pettit

FEBRUARY 1, 2, 3, 1960, SCHOOL OF VETERINARY MEDICINE, DAVIS

MONDAY, FEBRUARY 1, 1960

GENERAL SESSION

Morning

9:00-12:00—CVMA Registration, Haring Hall.

Afternoon

Auditorium

Chairman, STEWART A. FULLER

- 1:30—Invocation, The Rev. Dwayne L. Proett.
- 1:35—Welcome from the Davis Campus, Emil M. Mrak, Chancellor, University of California at Davis.
- 1:40—Welcome from the School of Veterinary Medicine, Dean Donald E. Jasper, University of California.
- 1:45—Response, Charles H. Ozanian, President CVMA.
- 1:50—Why Stand Alone? Samuel F. Scheidy, President AVMA.
- 2:25—Veterinary Medicine in Russia, Dean R. J. Jensen, Colorado State University.
- 2:55—Etiology and Treatment of Cystinuria, Harold A. Harper.
- 3:30—Principles of Surgery, James Archibald.

TUESDAY, FEBRUARY 2, 1960

SMALL ANIMAL SECTION

Auditorium

Morning

Chairman, ROBERT E. PHILBRICK

- 8:30—Film—Prostatectomy, narrated by James Archibald.
- 9:00—The Diagnosis of Thyroid Insufficiency in the Dog, Jiro J. Kaneko.
- 9:25—Surgery of the Urinary Tract, James Archibald.
- 10:05—Pathogenesis of Experimental Canine Coccidioidomycosis, Raymond E. Reed.
- 10:35—Pointers on Handling and Treatment of Wild Animal Pets, Werner B. Heuschele.
- 11:05—A Study of the Lacrimal Apparatus of the Dog with Special Reference to Epiphora, Seymour R. Roberts.
- 11:30—College Research Contributions in Small Animal Medicine, Wayne O. Kester.

Afternoon

Chairman, EMMET W. PAUL

- 1:30—The Diagnosis of Diseases of Small Animals by Histopathologic Methods, Erwin L. Jung-herr.
- 2:00—Clinical Research in Small Animal Practice, George R. Burch.
- 2:30—The Diagnosis of Hepatic Disease in the Dog, Charles E. Cornelius.
- 3:00—Clinical Pathology Conference. A case for diagnosis submitted by the Small Animal

Clinic, School of Veterinary Medicine, to be discussed by Brian L. Hutcherson, Philip L. McClave, John S. Blackard, and William E. Steinmetz.

TUESDAY, FEBRUARY 2, 1960

LARGE ANIMAL SECTION

Room 176, Home Economics Building

Morning

Chairman, CHARLES S. CRANE

- 8:30—Film—Demonstration of the Capture Gun on Range Beef Cattle, narrated by Werner B. Heuschele.
- 9:00—Rumenitis—Liver Abscess Complex in Feedlot Cattle, Rue J. Jensen.
- 9:35—The Vanishing Veterinarian, Blaine McGowan.
- 10:10—Improved Methods in Animal Breeding, Reuben Albaugh.
- 10:40—Recent Advances in the Prevention and Treatment of Bloat, James M. Boda.
- 11:10—Veterinary Management and Medicine in a Range Beef Operation, Roy E. Mason.
- 11:35—The Diagnosis of Trichomoniasis and Vibriosis, John W. Kendrick.

Afternoon

Chairman, ERNEST M. MAKINO

- 1:30—The Treatment of Colic in the Horse, James L. Temple.
- 2:00—Approaching the Equine Case, Wayne O. Kester.
- 2:30—Polioencephalomalacia of Cattle and Sheep, Rue J. Jensen.
- 3:00—The Veterinarian's Place in an Integrated Operation, Edward E. Stuart.
- 3:20—The Livestock Remedy Law and the Veterinarian, H. E. Spires.
- 3:40—Present Concepts Concerning Bovine Lymphosarcoma in the Herd, Gordon H. Theilen.

WEDNESDAY, FEBRUARY 3, 1960

GENERAL SESSION

Auditorium

Morning

Chairman, C. E. CORNELIUS

- 8:30—Film—The Left Flank Cesarean in the Standing Cow, Otto Straub and John W. Kendrick.
- 8:45—Metabolism in Domestic Animals, Arthur L. Black.
- 9:15—Some Veterinary Aspects of the Atomic Age, Marvin Goldman.
- 9:45—Questions.
- 10:45—Closed Circuit TV.

Afternoon

- 1:30—Closed Circuit TV.

Conference Speakers

- Albaugh, Reuben, B.S., Extension Animal Husbandman, University of California, Davis.
- Archibald, J. A., D.V.M., Head, Small Animal Division, Ontario Veterinary College, Guelph, Ontario, Canada.
- Black, A. L., Ph.D., Associate Professor of Biochemistry, University of California, Davis.
- Blackard, J. S., D.V.M., Practitioner, El Sobrante.
- Boda, J. M., B.S., Ph.D., Associate Professor of Animal Husbandry, University of California, Davis.
- Burch, G. R., D.V.M., Pitman-Moore Company, Indianapolis.
- Cornelius, C. E., D.V.M., Ph.D., Assistant Professor of Veterinary Medicine, University of California, Davis.
- Cripe, W. S., D.V.M., Practitioner, Elk Grove.
- Fowler, M.E., D.V.M., Instructor of Veterinary Medicine, University of California, Davis.
- Fuller, S. A., D.V.M., Practitioner, Arcata.
- Goldman, M., Ph.D., Atomic Energy Project, University of California, Davis.
- Hare, C. L., D.V.M., Practitioner, San Fernando.
- Harper, H. A., Ph.D., Professor of Biochemistry, Department of Surgery, School of Medicine, University of California, San Francisco.
- Harris, R. J., D.V.M., Practitioner, Turlock.
- Heuschele, W. B., D.V.M., Zoo Veterinarian, San Diego.
- Hutcherson, B. L., D.V.M., Practitioner, Reno.
- Jensen, R. J., D.V.M., Ph.D., Dean, Veterinary School, Colorado State University, Fort Collins.
- Jungherr, E. L., V.D., D.M.V., Lederle Laboratories Division, American Cyanamid Company, Pearl River, New York.
- Kaneko, J. J., D.V.M., Ph.D., Associate Professor of Clinical Pathology, University of California, Davis.
- Kendrick, J. W., D.V.M., Ph.D., Associate Professor of Veterinary Medicine, University of California, Davis.
- Kester, W. O., D.V.M., Morris Animal Foundation, Denver.
- Mason, R. E., D.V.M., Practitioner, Ione.
- McClave, P. L., D.V.M., Practitioner, Reseda.
- McGowan, B., D.V.M., Assistant Professor of Veterinary Medicine, University of California, Davis.
- Pettit, G. D., D.V.M., Assistant Professor of Veterinary Medicine, University of California, Davis.
- Reed, R. E., D.V.M., Professor of Veterinary Science, University of Arizona, Tucson.
- Roberts, S. R., D.V.M., Practitioner, Richmond.
- Sattler, F. P., D.V.M., Practitioner, Fullerton.
- Scheidt, S. F., V.M.D., President, AVMA, Philadelphia, Pennsylvania.
- Simesen, M., D.V.M., Research Fellow, Department of Animal Husbandry, University of California (On leave from Royal Veterinary Medical and Agricultural College, Copenhagen, Denmark).
- Spires, H. E., Chief, Bureau of Field Crops, Department of Agriculture, Sacramento.
- Stansbury, R. L., D.V.M., Practitioner, Pasadena.
- Steinmetz, W. E., D.V.M., Practitioner, Sacramento.
- Stuart, E. E., D.V.M., The Quaker Oats Company, Decatur, Alabama.
- Temple, J. L., D.V.M., Practitioner, Arcadia.
- Theilen, G. H., D.V.M., Assistant Professor of Veterinary Medicine, University of California, Davis.

Closed Circuit Television Program

Moderators: G. D. PETTIT and J. W. KENDRICK

Wednesday, 10:45 - Recess, 1:30

Auditorium

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- Standing Castration in the Horse, James L. Temple.
- Liver Biopsy in the Cow, Mohs Simesen.
- Useful Dental Techniques in the Horse, James L. Temple.
- Bone Marrow Aspiration in the Cow, Murray E. Fowler.
- Demonstration of Vehicles Designed for Practicing Large Animal Medicine, W. S. Cripe and R. J. Harris.
- Renal Lithotomy, James Archibald.
- Uses for Airecast, F. P. Sattler.
- Trephining the Frontal Sinus in the Cat, R. L. Stansbury.
- Useful Procedures for the Small Animal Practitioner, R. L. Stansbury, F. P. Sattler, and C. L. Hare.

Ninth Annual WESTERN POULTRY DISEASE CONFERENCE

University of California at Davis

February 1, 1960

Chairman: L. G. RAGGI, Chairman, W.P.D.C.

- 9:00—Preventing Egg-borne Mycoplasmosis in Turkeys, H. E. Adler.
- 9:25—Vaccination by the Vent Route, S. B. Hitchner and R. W. Winterfield.
- 9:50—Landmarks in Avian Encephalomyelitis, E. L. Jungherr.
- 10:35—Recess.
- Chairman: A. S. ROSENWALD
- 10:45—Coccidiosis Control—A Method of Study, E. E. Stuart.
- 11:05—Experience with Fowl Pox Vaccination, D. E. Stover.
- 11:25—An Unidentified Agent from the Respiratory Tract, R. A. Bankowski.
- 11:40—"We Can Treat Pet Birds," R. W. Wichmann.
- 11:55—Laryngotracheitis Vaccination "Breaks," L. G. Raggi.
- 12:10—Panel: Mixed Infections and Respiratory Disease in Southern California.
Moderator, E. E. Jones.
Pasteurella Infections, D. S. Clark.
Infectious Coryza and *Hemophilus*, W. D. Urban.
Killed and Live Vaccines Plus Management, R. D. Olsen.
- 1:00—Business Meeting.
- 1:15—Recess for CVMA General Session and Meeting; reconvene at
- 5:45—Informal Dinner.
Poultry Practice and Diagnosis, R. W. Keirs.
Therapy of Respiratory Diseases—Roundtable.
Drugs and Carcass Quality, E. E. Stuart.
Antibiotic Studies, L. E. Barnes, R. F. Baker, K. E. Price.
Additional Research Data, Other Veterinary Participants.
- 9:30—Adjourn.

Attendance at these meetings is limited to veterinarians, veterinary students, qualified publicly employed personnel or special guests.



R. W. COLLINSON
Program Chairman

Midwinter Conference

DAVIS

February 1, 2, 3, 1960

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C. E. CORNELIUS
Co-Chairman

House of Delegates meets January 30 and 31, El Rancho Hotel

Speakers, Poultry Conference February 1, 1960

- H. E. Adler, D.V.M., B.S., Ph.D., School of Veterinary Medicine, University of California, Davis.
- R. F. Baker, D.V.M., Abbott Laboratories, No. Chicago, Ill.
- R. A. Bankowski, D.V.M., Ph.D., School of Veterinary Medicine, University of California, Davis.
- L. E. Barnes, D.V.M., Eli Lilly and Company, Greenfield, Indiana.
- D. S. Clark, D.V.M., Demler Farms, Anaheim.
- S. B. Hitchner, D.V.M., American Scientific Laboratories, Madison, Wisconsin.
- E. E. Jones, D.V.M., Livestock and Poultry Pathology Laboratory, California State Department of Agriculture, San Gabriel.
- E. L. Jungherr, V.D., D.M.V., Lederle Laboratories Division, American Cyanamid Company, Pearl River, New York.
- R. W. Keirs, D.V.M., Northwest Veterinary Poultry Supply, Lynden, Washington.
- R. D. Olsen, D.V.M., Practitioner, Pomona.
- K. E. Price, D.V.M., Chas. Pfizer & Co., Terre Haute, Ind.
- L. G. Raggi, D.V.M., Ph.D., Chairman, Avian Medicine, School of Veterinary Medicine, University of California, Davis.
- A. S. Rosenwald, D.V.M., Ph.D., Extension Poultry Pathologist, University of California, Davis.
- D. E. Stover, D.V.M., Division of Animal Industry, California State Department of Agriculture, Sacramento.
- E. E. Stuart, D.V.M., The Quaker Oats Company, Decatur, Alabama.
- W. D. Urban, V.M.D., Practitioner, Ontario.
- R. W. Wichmann, D.V.M., School of Veterinary Medicine, University of California, Davis.
- R. W. Winterfield, D.V.M., American Scientific Laboratories, Madison, Wisconsin.

Midwinter Conference Events

Complete Details on
PRESIDENT'S BANQUET
VETERINARY ALUMNI DINNERS
A.A.H.A. MEETING

will be reported in full in the

JANUARY BULLETIN

Fifth Annual Large Animal Practitioners' Luncheon

The H. C. Burns Company will present its fifth annual Large Animal Practitioners' Luncheon on Sunday, January 31, 1960, 12:30 P.M. in the Hotel El Rancho, official headquarters for the CVMA Midwinter Conference.

The program will be "Economics and Development of a Sheep Practice."

Midwinter Women's Auxiliary Meeting

This year's Midwinter ladies' auxiliary luncheon and fashion show will be held on Tuesday, February 2, at 12:30 in the newly built Sacramento Inn (on Arden Way next to the new Sears store.)



MRS. R. F. LEWIS

According to the general chairman, Mrs. R. F. Lewis of Sacramento, this year's theme will be taken from the Winter Olympics, which begin in nearby Squaw Valley only a week after the luncheon. The spacious facilities of the Sacramento Inn will accommodate all auxiliary members and as many guests as they wish to bring.

Mrs. Lewis has announced the following members of the Sacramento Valley Auxiliary to head up the various committees: decorations, Mrs. R. A. Jakotich and Mrs. H. A. Hoffman; models, Mrs. R. A. Mueller; tickets, Mrs. Don Blomberg and Mrs. Robert Goulding; favors, Mrs. Ronald Hauge and Dr.

Ernestine Payen; canine models, Mrs. Max Harry; and programs, Mrs. L. D. Meyers. Negotiations for a commentator with celebrity status to present the Charlotte Green fashions are currently underway.

Reservations may be made by writing Mrs. William Steinmetz, 3520 Brockway Court, Sacramento 18, or Mrs. Robert Goulding, 3711 Park Road, Sacramento 21. Tickets will also be available on Monday morning, February 1, near the registration desk in the School of Veterinary Medicine at Davis.

* * * *

Midwinter Auxiliary Business Meeting

The general Midwinter business meeting of the Women's Auxiliary to the CVMA will be held on Monday, February 1, in the El Rancho Hotel, following a coffee hour scheduled for 10:00 A.M.

* * * *

Attention! Local Auxiliary Presidents

The presidents of all local auxiliaries throughout the state are cordially invited to attend the State Auxiliary Executive Board luncheon and business meeting to be held on Sunday, January 31, at 1:00 P.M. in the El Rancho Hotel. The president of the Women's Auxiliary to the Junior Veterinary Medical Association on the Davis Campus is also invited to attend.

So. Cal. Women's Auxiliary Fashion Luncheon

The Women's Auxiliary to the Southern California Veterinary Medical Association held their annual benefit for Guide Dogs for the Blind at San Rafael on October 20. The Silver Collar Fashion Luncheon was held in the Coconut Grove of the Ambassador Hotel.

There were 365 lovely ladies to view and enjoy Ohrbach's fall-winter collection of European *haute couture* imports.

This event is the Auxiliary's only fund-raising project during the year, and proceeds are to be used to purchase Guide Dog units for sightless persons in Southern California.

Mrs. Philip C. Olson, President, had as her committee: Mrs. Herbert Ott, general chairman; Mrs. Darr Jobe, fashion show and program; Mrs. Robert Schwarzmenn, door prizes; Mrs. Donald McDole, reservations; and Mrs. Charles Ozanian, luncheon tickets.

The veterinary students wives cordially invite all veterinary wives accompanying their husbands to the Midwinter Conference to join them at coffee on Wednesday, February 3, from 10 A.M. to noon, in Davis.

National Veterinary Wholesalers

Independently owned and operated veterinary distributors selling exclusively to the veterinary profession have formed the National Veterinary Wholesalers Association.

The NVWA is composed of five regions covering the United States. Regional directors are: Dr. H. C. Burns, western region; Mr. Herb Holmes, north-central region; Mr. Jack Miller, south-central region; Mr. Guy Stephenson, president, north-eastern region, and Mr. Carl Sutton, south-eastern region.

George C. McConnell has been named executive secretary. Inquires and correspondence should be directed to him at P. O. Box 1527, Oakland, Calif.

The western region, NVMA, meets February 1, 1960, at the Hotel El Rancho, headquarters for the CVMA Midwinter Conference.

Members of the Southern California veterinary Medical Association donate their time and equipment to the local rabies clinics, and auxiliary members along with civic organizations serve as volunteers at these clinics. Ninety-one clinics were held last year, vaccinating a total of 25,972 dogs.

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State President, Women's Auxiliary

Mrs. Ben S. Burdo, our energetic State Auxiliary President, was born and still resides in the spacious ancestral home near Sebastopol, California. Her social consciousness was stirred early in life, and she took a degree in sociology from the College of the Pacific, preparing herself for twelve busy years as a social worker.

She and Dr. Burdo met when he was singing on a San Francisco radio station and she was hired to be his accompanist. Since that time they have generously shared their musical talents with the people of Sonoma County, where Dr. Burdo is a busy practitioner.

Two lively sons in grade school and managing the business end of her husband's practice combine to keep Mrs. Burdo well occupied. However, she has managed her time so as to be of considerable service to her community and county. She is a past president of Sorptomist International, and past president of the Sonoma County Tuberculosis and Health Association. She organized the Sonoma County Association of American University Women and has served on the Sonoma County Republican Central Committee as well as on the State Republican Central Committee.

In addition to serving as State Auxiliary president this year, Mrs. Burdo is a member of the Executive Board of the College of the Pacific Alumni and a member of the Sonoma County T. B. and Health Association Board. She also finds countless opportunities to be helpful to groups and individuals of the community in an unofficial way.



MRS. BEN S. BURDO

On October 21 the Women's Auxiliary to the Sacramento Valley VMA was privileged to have President Burdo speak to them on the objectives of the State Auxiliary. That evening she addressed approximately 100 veterinary student wives on the Davis Campus. On November 11 she met with the wives of Oakland veterinarians, and on November 16 attended an organizational luncheon meeting of San Francisco veterinary wives in the Yosemite Room of the Red Chimney in Stonestown.

MRS. ELIZABETH A. JASPER
Publicity Chairman

Changes on Marketing of the California Mastitis Test (CMT)

To date, the California Mastitis Test has been legally distributed only through veterinarians and by companies which through license arrangements have produced a product adhering to the formula tested and approved by the University of California. This policy was in keeping with the realization that the test is without great merit unless it was correctly performed and interpreted. Furthermore it is recognized that competent professional advice and assistance is essential to the correction of any mastitis problem revealed by the test.

As a consequence of certain legal problems which have arisen, and the possibility that inferior substitutes may be extensively promoted, it will henceforth be possible for properly licensed companies to market CMT test solution and paddles through lay channels.

Bovine Mastitis—Short Course

December 28-29, 1959

University of California

School of Veterinary Medicine, Davis

A brief, concise course is planned for veterinarians in diagnostic methods; sensitivity testing; milking machine use, abuse, and trouble shooting; and specific disease problems prevalent in California dairy herds.

This course, offered by the University of California, School of Veterinary Medicine's program of Continuing Education in Veterinary Medicine in cooperation with the Agricultural Extension Service, is aimed specifically at herd control programming to combat mammary disease. Further information on course details and registration will be sent directly to all contract veterinarians at a later date.

D. E. JASPER, *Dean*

Canine Distemper Immunization

R. C. SCHOCK, D.V.M., *American Cyanamid Company*

The immune response to canine distemper vaccination is one of the most controversial subjects in the practice of veterinary medicine. Many veterinarians have strong opinions of what will and what will not work . . . so strong that it takes fortitude to initiate any discussion on the problem.

Most of the controversy evolves around the vaccine used. Perhaps this is because the makers have publicized their various antigens to the point where, to the practitioner, this is the *one* factor upon which success or failure depends.

However, there is evidence that this view is being modified. Men like Baker, Cabasso, Gillespie and Gorham have shown that the best antigen will not stimulate protection unless it is used prudently. Immunity requires (1) an effective vaccine (2) properly injected (3) into a receptive subject. These are the three basic facts of immunization and all are equally important.

1. Three types of vaccine are available commercially: inactivated virus, ferret origin live virus and a modified live virus of chick embryo origin. Inactivated virus requires repeated injections—otherwise immunity wanes in about six months. Both ferret origin and chick embryo origin antigens will stimulate complete, long lasting immunity. But, ferret origin virus does create a reaction problem and titration to establish uniform high potency is difficult and unreliable.* Of the three, only chick embryo origin virus meets the standards for an effective antigen: (a) efficacy (b) safety (c) titratable potency.

2. Veterinarians are well aware that faulty storage or use of a live virus product can create a hazard. Vaccines must arrive and remain under refrigeration until use, must be used soon after reconstitution, in a syringe and needle sterilized only by boiling or autoclaving and properly cooled. Otherwise, inactivation of the virus will nullify the whole procedure.

3. The recipient animal must be unexposed and susceptible to distemper. Here lies the answer to the question, "How would you immunize a six-weeks old puppy?" Technically the question does not offer enough information so an answer can be given. What is the immune status of the puppy? Of its mother? How long did it nurse? Has it been exposed?

These are questions to which the practitioner

needs answers in order to apply the proper immunization plan. Regrettably, the answers are almost never available. Some veterinarians are moving the serum neutralization tests and maternal nomographs out of the laboratory and into their practices to guide them. Wuori, writing in the N.Y.C. Veterinarian, predicts these tests will be in general use soon.

Lacking this information, the practitioner still is faced with his original question—the six-weeks old puppy with an unknown immune history. This puppy should be considered too young to respond properly to the injection of an antigen. Interference antibodies still may be present.

Research has shown that the proper age for permanent immunization is eight or nine weeks. Below this age, maternal antibodies interfere with the immune response, raising the percentage of failures. The factor of exposure or non-exposure is almost academic . . . all dogs should be considered exposed in the general run of a practice.

On this basis, dogs under eight weeks of age should be given antiserum (1 cc. to 2 cc. per pound of body weight) at 10-14 day intervals until old enough to be actively immunized. Wait at least two weeks after the last dose of antiserum, then give simultaneously antiserum and chick embryo origin vaccine. Whenever possible, repeat vaccine injection within four to six months. This will "catch" those dogs who still had enough antibodies when first immunized to interfere with the immune response.

Admittedly, this is not the best way to immunize a dog against distemper. It is the best *practical* way we have. The fault lies not with the antigen, but with ignorance of the immune status of the dog. Chick embryo origin vaccine will stimulate a complete, long lasting immunity when it is given the chance.

Okay Lay Personnel Practice in State Institutions

Your Executive Secretary recently asked the Executive Secretary of the Board of Examiners in Veterinary Medicine for a ruling from the Attorney General of the State of California concerning lay personnel practicing veterinary medicine in state institutions.

Under date of October 30, 1959, Attorney General Stanley Mosk ruled (Opinion 59/214) that: *The performance of acts constituting practice of veterinary medicine by state employees in the performance of their duties as herdsmen or dairymen at state institutions is not in violation of the Veterinary Practice Act.*

*Ferret origin vaccine must be titrated in ferrets. Here, the same factors that interfere with immunization must be overcome, i.e., parental immunity, prior exposure, other infections, etc. In contrast, as reported by Baker, Cabasso, and others, chick embryo origin virus produces measurable lesions on the chorio-allantoic membrane of the chick embryo, making titration with hyperimmune serum practical.

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Question and Answer Luncheon*



Standing: J. L. Sullivan, Robert Schwarzmann. Seated: Kenneth B. Haas, V. L. Tharp, Herbert N. Snow.

1. Q—If an animal contacts a disease (probably distemper) while at your hospital, who pays the bill?

A—Dr. Sprowl: I think that you should assume the cost of treating the animal but you should not assume the legal responsibility. The only thing you have to worry about is negligence if they can prove it. If you told them in the beginning that the animal cannot contact the disease in your hospital then they would have some grounds for negligence. I would be extremely careful in talking to the client over the phone or otherwise admitting negligence. Some veterinarians even feel that they should recompense the owner for the dog. If you do that you may be admitting negligence, at least they have basis for that if it comes to court. The attorney can say that there is some reason why you would want to recompense for the dog.

2. Q—To Dr. Haas. Should corticosteroids be used in the face of high blood urea and other indications of renal malfunctions? If so, at what dosage level?

A—There are about eight different relative contraindications for the use of corticosteroids. These include such things as diabetes mel-

litus, peptic ulcers, congestive heart failure, osteoporosis, TB and nephritis. In nephritis the increased blood urea is part of this relative contraindication category. Now, it has been used. There have been recent papers in the human field where corticosteroids have been used in high dosages for long periods of time in nephritis where it was thought they would have a beneficial effect. It is quite a different thing in the case of nephrosis. The nephrotic person is the individual wandering around with the shoe laces untied, can hardly get his shoes and socks on and is water logged, usually in the lower extremities. In nephrosis where there is some type of functional, not anatomical, derangement the corticosteroids have been effective. In the nephritic condition where there is bacterial infection and primary changes, it may or may not be indicated. Certainly in an animal with elevated blood urea it would not be indicated. With moderate or low blood urea it could be indicated in those cases.

3. To Dr. Haas. Would you suggest the use of calcium, the use of potassium, the use of a decreased salt intake on animals on Prednisone or Prednisolone over prolonged periods? Has it been shown that atrophy or degeneration of the adrenal glands results from the prolonged use of corticosteroids without ACTH to stimulate them?

*Presented at the CVMA Convention, Santa Monica, June 21-23, 1959.

A—Yes, yes, yes and yes. And also oral or injectable estrogens and androgens in combination. These increase mineralization of bone and offset the calcium pushout of the corticosteroids. Yes, I would certainly use calcium and deposition substances such as estrogens and androgens. Certainly potassium would be indicated were it used for long periods of time. Particularly where high doses of steroids are important. Potassium can be given intravenously or orally. The salt should be decreased. There is such a thing, however, in humans and dogs of having too much salt-free diet. Adrenal depression is less with the newer corticosteroids than with cortisone and hydrocortisone. Although the dogs drink and urinate a lot they are often safe for a couple of weeks although neither you nor the owner would stand for two weeks of this dribbling and dosing. We usually cut the dose back in these cases. They will compensate and even after 6 to 8 months the adrenals show very little change on the newer corticosteroids. Nothing is known about the use of ACTH in the veterinary field.

4. To Dr. Benjamin. In persistent pH of 8.0 and up in cases of hemorrhagic cystitis and interstitial nephritis, how can we reduce the pH to 6 under home conditions?

A—In the case of cystitis the important thing is to treat the infection rather than try to reduce the pH unless we are dealing with a case of urinary calculi and are worried about the formation of stones because of the pH. In a case of persistent cystitis and interstitial nephritis with a pH of 8 we should consider that the pH has been increased because the animal probably has a urease splitting organism in the bladder causing the infection. Our treatment should be directed against counteracting this organism rather than changing the pH unless of course the drug that we are using has its beneficial action in the acid range. The first thing one should do is run an antibiotic or other drug sensitivity test on this organism or use a product such as Urised which has everything in it and will do the same thing.

5. To Dr. Benjamin. What is the normal range for serum cholesterol in dogs and cats and also what is the protein-bound iodine range?

A—140 to 215 is considered the normal range for serum cholesterol. However, we don't consider the increase is of any clinical significance until it goes up to 260 or 270. For FBI we have a very limited number of tests that we have run and those are in the range of 4 to 6.

6. To Dr. Benjamin. Please give the pros and cons on the Microhematocrit vs the Wintrobe method.

A—Certainly the speed involved with the Microhematocrit is a decided advantage over the Wintrobe method. In some small animals you can only use the micro method due to the small amount of blood available. On the other side of the ledger is the cost. A Clay Adams model 2002 centrifuge runs about \$100 and in addition it may be used for other purposes using other sized tubes. The International Microhematocrit is useful for only one thing and that is for spinning at high speed. It is much more expensive. The Phillips-Rucker centrifuge which I mentioned has the advantage of being fast enough to do microhematocrit but it is also slow enough so that you can use larger size tubes. This will cost about \$200.

7. To Dr. Benjamin. What is your diagnosis and treatment for feline infectious anemia?

A—The only time you can be confident that you are dealing with FIA is when you can demonstrate the organisms in the red blood cell. If you cannot do that you certainly consider the other causes of anemia. In our school some of the people go overboard and call every anemia in the cat FIA. This is not the case and in our laboratory we find it in the ratio of only about 1 to 50 anemias due to other causes. The continuous use of Chloro-

(Continued on page 26)

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Pfizer Holds Dermatology Clinics



Dr. Kral (left) and Dr. Howard Carroll at San Francisco meeting.

The first of a series of nationwide veterinary dermatology seminars, presented by the Department of Veterinary Medicine of Pfizer Laboratories, a division of Chas. Pfizer & Co. Inc., were conducted in Los Angeles, November 1 and 2, and in San Francisco on November 8 and 9.

Dr. Frank Kral, noted authority and professor of veterinary medicine at the University of Pennsylvania, conducted the clinics.

The two-day sessions were well attended and proved highly interesting and instructive to overflow audiences. Veterinarians presented cases of skin disorders, citing individual histories, and Dr. Kral discussed and diagnosed each.

A manual, prepared by Dr. Kral, who authored a standard textbook on veterinary dermatology, was distributed to supplement lectures, laboratory and clinical work. Covered were the anatomy, physiology and pharmacology of the skin.

According to Simon J. Kalish, D.V.M., associate veterinary medical director of Pfizer Laboratories, other seminars will be presented throughout the country. The company is sponsoring the series in response to numerous requests received by Dr. Kral.

The Los Angeles symposium was held in the Ambassador Hotel, under the sponsorship of the Southern California VMA. The San Francisco meeting was held in the Sheraton Palace Hotel, sponsored by the Bay Counties VMA.

Dr. M. C. McSpadden, Banning, is a member of the Banning Elementary School Board. He also serves on the CVMA Legislative Committee.

Questions and Answers

(Continued from page 25)

mycetin for 21 days is probably the most effective. The arsenicals are too toxic to use in cats.

8. To Dr. Edds. Can Halothane be used on large dogs without preanesthetic agents and brought to a surgical plane using a cone only? Can it be used on caesarians without the danger of narcotizing the pups?

A—Yes and yes. It has been used, however, both with barbiturates as preanesthetics and alone. Those that use it alone do not feel that there is enough excitement to warrant a preanesthetic. Those who do feel the other way use surital or pentothal.

Experience in England has led them to believe that they save one more pup per litter than they do with other agents.

9. To Dr. Edds. If a dog 7 to 8 weeks old is presented having a fever of 102.8, purulent nasal and ocular discharge, do you think that using serum at this time would facilitate nervous symptoms if the animal turns out to be incubating distemper? Also do you think that it would be better to give an attenuated virus when the puppy is presented in hopes of blocking rather than giving the serum?

A—I would like to suggest two other modifications. We'll assume that although the puppy is showing symptoms, that they have just started. Second, that the temperature rise has just taken place since yesterday and that the normal in this dog is 101.5, rather than 102.5. I would like to answer it this way. Assuming that distemper has just started and the dog has not yet developed this worried look to its face, furrowed brow, there is no congestion of the retinal vessels or tortuous retinal vessels showing, which means that he is in the incipient state and assuming these points, then I feel that the serum would be advantageous. The use of Mylepsin simultaneously with the serum plus supportive treatment has resulted in about 80% survival of these dogs as opposed to control groups where only about 20 to 25% survived.

10. To Dr. Tharp. What is your treatment of chronic cystic ovaries in cattle? What is your opinion on removing retained corpora lutea? Does the damage warrant this?

A—I like chorionic gonadotrophin if the case will warrant the cost. We start out with 2500 to 5000 units intravenously and don't repeat if it doesn't work. I switch to a whole suspension of sheep pituitary (Vetropin) and get fairly good response of about 80%.

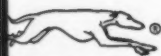
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IS THIS THE ANSWER?

CHARLES H. REID, D.V.M., *Practitioner, Hollywood*

The photograph depicts a Lippizan stallion, 10 years old. This horse has been under our supervision for about eight months now, and during that time has been treated and fed the same as several others on the same premises.



About the middle of July we were called to see this horse in the afternoon, having been informed he was sick — he was!

Symptoms were as follows: Animal breathing hard, about 20 respirations per minute, some sweating, no appetite, very little drinking, temperature 104, animal walking in circles to the left in the stall and outside the stall, some disturbance in vision evidenced by colliding with objects in front of him, obvious weakness of the hind quarters, and when forcibly made to stop walking the entire rear end would fall to the right, the front end remaining upright. Upon recovery the walking would resume, and if not stopped the animal would be able to stay on its feet, although circling. Pulse was 75, full, there was a "raw" spot on the nose about two inches in circumference, and upon opening the mouth the gums and tongue had extensive white areas and lines through the tissues, and all mucous membranes and the sclera were stained a deep goldenrod color. The weakness of the hind quarters, incoordination, dragging of the rear toes, and the jaundice immediately reminded us of the mare described by us on Page 28, May-June issue of *THE CALIFORNIA VETERINARIAN*.

Having seen this horse some two days before, at which time it was apparently all right, it was obvious to us that we had something new on our hands. We also recalled that the mare mentioned previously had been sick some 10 days before we were called — that explained her cachectic condition, for the non-eating, weakness of rear quarters, jaundice, were parallel in both cases. Exception was the presence of the nose lesion and mouth lesions in this horse. Diagnosis was paramount before treatment and this was explained on the common-sense basis that one cannot treat

until one knows why they are treating — although this has been done! A blood sample was drawn, and this turned out very low in red cells; about 3 million plus. This then, was another common point between the two animals, except that (possibly due to elapsed time) the mare had practically no red cells at all. Of course this blood picture came later.

So, we were stumped! In our mind we could not eliminate a picture of some chemical burn and erosion, but it was only supposition, and we so stated. Being somewhat stubborn natured, we decided to traverse on foot every stall, premise, corral or place in or on which this horse had been during the last three days; the horse was left "circling," and the human walking began. Meanwhile we noticed the other horses on the premises were all entirely normal: we also reflected, while walking, that this WAS NOT encephalitis, as generally recognized, neither was it botulinus, nor rabies. What in H--- was it then? Thank the Lord the owner had confidence in the veterinary profession and was a patient soul! The third time around we were rewarded — at the end of a large building in which the horse had been placed at night, was a large door opening across which had been erected a make-shift door consisting of spaced lath and wire. The lath had been recently painted with creosote, and something had been nibbling on it. Inquiry elicited the information that the creosoting was three days old, also that THIS HORSE had been observed chewing on it, and had been noticed to swallow good size splinters of it. Then, and then only, we had sense enough to go back to the horse, lift up his tail, and observe that the anal orifice bore the same type of "burn" marks — ain't it easy, now? We treated the horse, then dug out an old creosote container, traced the product to the retailer, jobber, wholesaler, right back to the large industrial steel company which manufactured it (many miles away) and from them acquired quite an education, being informed that this product was truly coal-tar creosote (as compared to wood creosote), it is a by-product of coke-making, which is an essential element in the steel-making industry.

Back to the horse — the next day it was walking in a straight line, temperature had dropped to 102, and stayed there three days, then returned to normal — as did the horse. Now, of course, we know we were dealing with a chemical toxic picture or syndrome, of such intensity that the liver could not handle it, which secondarily had produced encephalitis.

Now the great curiosity! The next day we immediately journeyed to the premises of the

"previously mentioned mare" and judicious query resulted in the information that the corral fence in which she was kept had been creosoted about a week before she showed the inappetence — she would also chew on the fence — not only that, but the fence had been re-creosoted three days before the relapse mentioned in the article, which was quite a puzzle to us then! Now, we're REAL smart!

We believe that comparison of these two cases constitutes sufficient ground for revision of the literature on creosote poison in animals, because all the literature we have been privileged to read has described ONLY acute phenol poison, and apparently all the authors have quoted the first writer. Perhaps this should be brought to the attention of those who essay to write toxicologies.

We believe also that these reports should warrant interest on the part of our educational institutions, if not some of the commercial firms, to the end that some experimentation should be undertaken to prove authenticity of these symptoms and toxicology described herewith.

We can also assure our confreres that such cases are not profitable — that is, dollars and cents wise — but, they do result in great satisfaction, and should emphasize that members of our profession are truly "servants of the live-stock industry" primarily.

What think you?

Suspension of Brucellosis Testing

State Director of Agriculture W. C. Jacobsen announced that reduction of federal funds will cause suspension of federal-state brucellosis cattle testing in eight California counties effective October 1.

The counties in which brucellosis testing under the federal-state cooperative program will be delayed are: Merced, Madera, Fresno, Kings, Tulare, Kern, Santa Barbara and Ventura.

Due also to the cut in federal funds, the Director said brucellosis testing scheduled to begin January 1, 1960, in the Southern California counties of Los Angeles, Orange, San Bernardino, Riverside, San Diego and Imperial, will not be started. There will be no curtailment of testing in other counties.

Director Jacobsen said that the cut-back in brucellosis testing in California is due directly to the action of the U. S. Department of Agriculture in reducing its allotment of brucellosis testing funds to California by 19 percent. He added that brucellosis testing in all states will also be reduced as the result of an over-all reduction of 25 percent in the funds for the work by the federal agency.

Allergens—Apparent Cause of "Summer Itch" (Equine)

FLOYD A. ELLIOTT, D.V.M.,
Practitioner, Porterville

In our practice area (Southern Tulare County), a condition known as "Summer Itch" causes some of the horses a great deal of discomfort. There are many and varied degrees of severity of this condition ranging from mild tail rubbing and small areas of chronic urticaria about the head and neck to complete loss of mane and large areas of raw and weeping skin. These areas are always dry at first, but as the itching is continued and intensified, the animal actually rubs away the top layers of skin and serum starts to ooze. This moisture attracts flies and as a result of the additional annoyance, insult is added to injury.

This condition is a seasonal one which happens to coincide with the fly season. This, of course, leads many horse owners to believe that flies or other insects are the cause of the symptoms. However, fly spray just doesn't help the situation very much, in fact, in some cases it seems to aggravate the condition. Topical applications of various and sundry things give very little if any hope for better results. Many of the lesions have the appearance of ringworm but fungicides fail to yield satisfactory results. Almost anything can be cultured from these lesions.

After observing this condition closely for the past two seasons, I proceed on the premise that "Summer Itch" is caused by allergens which may also contribute to some degree of photosensitivity. The chief offender in this area seems to be native Bermuda grass. The victims are nearly always thin skinned animals and many of them will seek shade if it is available. If several horses are kept in the same pasture, there may be only one or two out of the group to show any symptoms of the condition.

Most cases will recover without treatment if they are taken away from the source of Bermuda grass (including lawn clippings) and furnished clean hay and shade. Steroids will step up the rate of recovery quite noticeably. Antihistamines are apparently helpful. A good "soap and water" bath will assist in producing immediate relief in many cases. With a therapeutic dose of any good steroid, many serious cases respond by complete cessation of rubbing and itching in less than 24 hours. Noticeable improvement of the skin lesions is apparent in less than a week. Without treatment, other than removing the source of the allergen, noticeable improvement is usually apparent within two to three weeks.

Laboratory Notes

From the Department of Clinical Pathology, School of Veterinary Medicine, University of California

The Sulfobromophthalein Sodium (Bromsulphalein®)* Liver Function Test in Veterinary Medicine. The ability of the liver to selectively excrete foreign dyes introduced into the general circulation has long been accepted as one of the more satisfactory liver function tests in human medicine. The uptake, conjugation, and excretion by the liver of Bromsulphalein (BSP) is a measure of both hepatic biochemical integrity and portal blood flow. The disappearance of BSP follows nearly an exponential course to 80 per cent disappearance, slowing thereafter.¹ The kinetics of BSP disappearance is of a difficult nature to interpret. Using ³²S-labeled BSP in dogs, it has been established that BSP excretion into bile at all infusion rates was slower than its uptake, so that increasing amounts of dye accumulated in the liver. Yet, under similar conditions, the BSP biliary excretion rates and concentrations were found to be dependent upon the infusion rate but independent of the amount of BSP storage.² Pathological conditions decreasing hepatic blood flow produce dye retention since less BSP is available for hepatic uptake. Both hepatic (i.e., diffuse hepatic fibrosis) and non-hepatic (i.e., shock, dehydration, tumor occlusion of portal vein) pathologies may produce similar BSP retention by restricting blood flow.

Contraindications to the use of BSP. The great sensitivity of the test may result in a significant degree of retention in such temporary functional disturbances as fever, shock and dehydration. The use of cholates therapeutically to increase bile flow in liver injury with intrahepatic biliary stasis may result in a significant degree of retention in such temporary functional disturbances as fever, shock and dehydration. The use of cholates therapeutically to increase bile flow in liver injury with intrahepatic biliary stasis may interfere with the BSP test since a competition for biliary excretion exists between BSP, bilirubin, and cholate, with BSP ranking lowest.³ In addition, alkaline serum samples containing bile pigments exhibit a red color which prevents an accurate quantitative estimation of the violet colored BSP. The BSP test is of little value in the differential diagnosis of icterus since any mechanical effects of biliary obstruction would naturally produce retention. The excretion of BSP appears to be similar to

*Bromsulphalein is manufactured by Hynson, Westcott, and Dunning, Inc., Baltimore, Md. 5% BSP is available in ampules of 3, 7, 10 and 20 ml. Comparator blocks for estimating the percentage of BSP retention are also available, from Hynson, Westcott, and Dunning, Inc.

¹See Bibliography page 50.

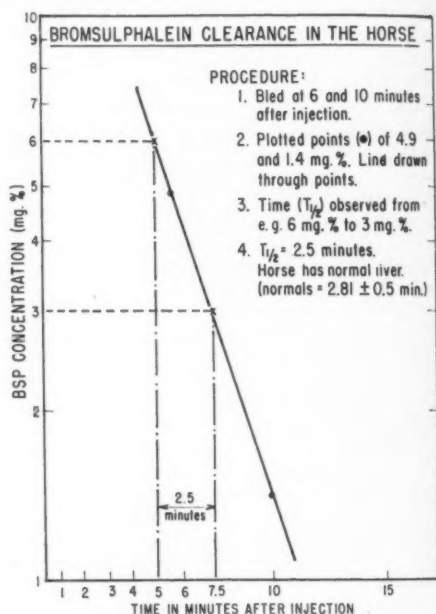


FIG. 1—Procedure for the calculation of Bromsulphalein Clearance.⁹

bilirubin, both being conjugated in the liver and excreted into the bile. The retention of BSP would therefore have a similar significance as the retention of free serum bilirubin in the absence of increased hemolysis.

Dog. The rate of disappearance and hence percentage retention in dogs is independent of dosage between 5-20 mg of BSP per Kg/body wt.⁴ The use of 5 mg per Kg. has been generally accepted by practitioners. In this method, one divides the dog's weight in pounds by 22 and secures a value equal to the number of mls. of commercially available 5 per cent BSP solution to be injected intravenously. Less than 5 per cent BSP retention at 30 minutes is generally considered to be within the normal limits for dogs in a positive water balance. The serum that is collected at 30 minutes after injection may be compared directly, using comparator block standards for the percentage of BSP retention. All necessary items for performing the BSP test are commercially available in kit form.⁵

The BSP test appears to measure latent liver damage of either fibrosis or necrosis. The BSP test may be used in conjunction with the serum glutamicpyruvic transaminase

(Continued on page 50)

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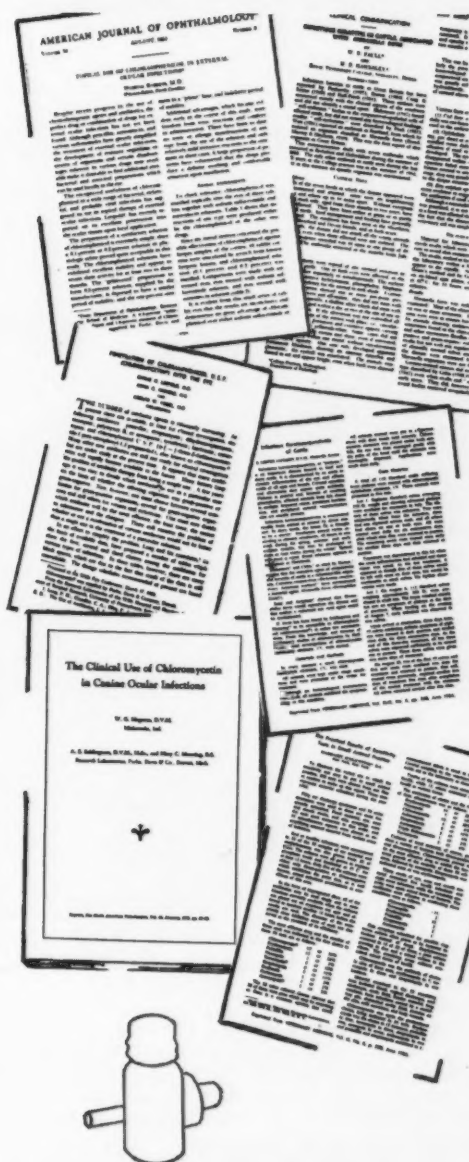
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Flying Is Fast, Economical For California Veterinarian

Dr. C. J. Ferreira and his two associates, Drs. G. E. Asher and R. M. Stoufer, of the Redding Veterinary Hospital, have found that flying to their clients is not only a great time saver, but is quite economical.



DR. FERREIRA and PILOT

In Dr. Ferreira's mixed practice he makes calls to surrounding towns anywhere from 50 to 75 miles distant. By automobile he can travel no better than 25 miles per hour over the mountain highways. For short trips to McArthur, 75 miles; Hayfork, 60 miles, and Weaverville, 45 miles, Dr. Ferreira uses a Cessna 172, rented from the H. and H. Flying Service, Redding. His pilot, Mrs. Hinds, owns the service. Such routine calls cost \$19.00 per hour, with pilot.

On longer trips a Cessna 182 is used. His large animal practice, being largely beef, has necessitated the use of a strontium probe. A visit to the Chandler Hereford Ranch at Baker, Oregon, was made for this particular work, and it would have taken from 12 to 14 hours by car. By plane, the trip to Baker required one hour and fifty-five minutes.

"Ours is a busy practice," said Dr. Ferreira, "and flying has cut our transportation time less than half. In emergencies the client is quite impressed, which makes for better client-practitioner relations. No difficulties or dissatisfaction have ever occurred on charges. We pay for the expense of the plane and attach the duplicate invoice to the client's bill."

Bovine Brucellosis Vaccine and Antigen

Section 754.7 of the California Administrative Code, controlling the sale, possession and use of vaccine and antigen containing brucella microorganisms, was adopted and filed with the Secretary of State on September 18, 1959. The regulation became effective October 18, 1959.

The new section defines who may buy, possess and use brucellosis test antigen and brucellosis vaccine. It also specifies that sales of such antigen and vaccine be limited to those persons or laboratories listed.

The regulation requires that all sales of brucellosis vaccine and antigen be reported to the Bureau of Livestock Disease Control within five days from the date of sale. Sales may be reported by letter or by submitting a copy of the sales invoice to the Chief of the Bureau of Livestock Disease Control, 1220 N Street, Sacramento 14, California.

The regulation further requires that the use in California of all vaccine containing brucella microorganisms be reported to the Chief of the Bureau of Livestock Disease Control within fourteen days from the date of use. The DAI Form 26, Report of Calves Vaccinated, will fulfill this requirement for vaccine used on the official State Calfhood Vaccination Program. The use of brucellosis vaccine, other than on the official program, must be reported by letter.

Gen. Kester to Morris Animal Foundation

Brig. Gen. Wayne O. Kester, past president of the AVMA, has been named Director of Professional Education by the Morris Animal Foundation, 510 Mile High Center, Denver, Colorado.

Gen. Kester is retired chief of the Air Force Veterinary Service and is president of the American Association of Equine Practitioners.

In the newly-created position, General Kester will serve as liaison officer between the Foundation's Board of Trustees, the veterinary colleges and the veterinary profession.

A prime objective of the Foundation is to encourage and enable veterinary students as well as doctors of veterinary medicine to continue in graduate training, teaching, and research.

The U. S. Livestock Sanitary Association will meet in San Francisco's Sheraton-Palace Hotel, December 16-18. F. G. Buzzell, Augusta, Maine, is president.

Canine Distemper Vaccine

Modified Live Virus

Chick Embryo Origin, Vacuum Dried

For active immunization of dogs against canine distemper



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Southern California - Las Vegas Symposium



At the Desert Inn—Mrs. Harry Costello, C. H. Ozanian, Mrs. Ozanian, I. M. Roberts, Mrs. Cope, R. L. Cope. Nighttime entertainment on Vegas Strip highlighted Symposium.

The 3-day symposium held October 25-27 at the Desert Inn, Las Vegas, under the sponsorship of the Southern California VMA and the Las Vegas VMA, was the most successful and best attended meeting of its kind ever held in the West.

Drs. A. Mack Scott, N. L. McBride and Murray H. Phillipson arranged an outstanding program covering large and small animal practice. A panel of distinguished speakers came from various parts of the West and Midwest.

Winners of the golf tournament, held in conjunction with the symposium, were: Dr. Harlan E. Jensen, recipient of the SCVMA low net trophy, and Dr. Tom McIntyre, low net guest trophy.

Special credit should be given Mrs. Claire Scott for providing the night entertainment at the various Las Vegas shows. She spent many hours phoning and contacting night spots for the group. Mrs. June Phillipson also did a fine job at the registration desk.

Massengill Introduces Hemostop

Hemostop, a new systemic hemostat developed by the Veterinary Division of the S. E. Massengill Company, controls bleeding by decreasing excessive capillary permeability and promoting the retraction of severed capillary ends.

Used pre- and postoperatively, Hemostop reduces oozing from incisions and provides a clear operative field. It lessens the incidence of postoperative hemorrhage and promotes healing. Hemostop is applicable in every type of surgical procedure.



Golfing Veterinarians—A. Mack Scott, Grant Misener, Kenneth Bone admiring trophy.

New Vaccine to Prevent Abortion

A new vaccine to prevent one kind of cattle abortion is being studied by University of California veterinary scientists.

The experimental vaccine was recently administered to 310 cows on ranches in Siskiyou and Monterey counties, said Dr. John W. Osbold, who, with Dr. John W. Kendrick, produced the vaccine. Both are on the School of Veterinary Medicine faculty at Davis.

The Davis scientists are hopeful that the killed-culture vaccine will reduce losses from abortion caused by a bacterium called "Listeria monocytogenes."



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Some of the Factors Influencing Success in Small Animal Practice*

RAYMOND W. SPROWL, D.V.M., *Practitioner, Los Angeles*

1. Conservation of health.
2. A practice doesn't have to grow like Topsy, but can be tailored and molded to the individual practitioner's personality, aims and desires.
3. Alter your responses and actions to conform to the many aspects of human nature and practice situations that arise daily that cannot be changed.
4. Clients are not interested in how tired you are, how sick you are, or whether you are detained after hours; only so far as it affects your treatment of their animal.
5. Limit factors in your practice such as:
 - a. Boarding. If you don't board you get referrals from boarding kennels. You are a little less busy on holidays and vacation time. You can do a greater volume, dollarwise, on smaller premises.
 - b. Grooming. We don't do any special clips. There are many places that do a much better job than we do. We groom anything but poodles and Bedlingtons. I think that clipping and bathing is a requisite part of your practice.
 - c. Ear crops. I don't mind cropping ears so much, but I can't stand the corrective procedures. Nor do I have time for it in my practice.
 - d. Birds, monkeys and the other odd animals.

6. Pay a second veterinarian more than he can make in a practice by himself. Aim at having a practice that will afford another veterinarian and at more money than he can make at his own practice.

7. Do a volume practice. Minimize hospitalization and do a large out-patient practice. A volume practice is one that satisfies your clientele and contributes to the building of a good reputation in your community.

8. Tailor your practice by selecting your clients and your patients.

9. A busy practice has to be served. I don't think it is a good policy to refer my clients to an emergency service. If my client's dog gets sick at 2 or 3 A.M., I think my clinic should be prepared to serve it. Another thing about that sort of practice is that if you are called at 3 A.M. and are going to go, then you should be happy about it. Many of these calls can be eliminated in the conversation.

10. A two-man practice is a personal practice. When you get more you must refer to charts. In a two-man practice without boarding you can maintain a good liaison between the two veterinarians so that you shouldn't have to consult the chart if asked about someone's dog.

11. A rotary phone system is a great advantage in our hospital. Each case that is serious talks to me personally or to the other veterinarian in my practice each day. If it is a skin case then it may be every third day. A personal touch in your practice is of extreme importance.

12. Practice by the Golden Rule. If a dog develops distemper in your hospital I think that it certainly should be admitted. We would never advise a client that their dog could not acquire the disease in our hospital. I think that truthfulness and integrity can be developed.

13. Develop conversational syndromes that fit a certain set of symptoms.

14. Develop the ability to feel what the client desires.

15. The ability to satisfy a large clientele is an acquired ability. Certain of the facets may be natural, but most of it is acquired.

News...

From Board of Examiners in Veterinary Medicine

The Board of Examiners in Veterinary Medicine held their fourth meeting of the calendar year in Los Angeles, October 7. At this meeting the forthcoming examination to be given at the School of Veterinary Medicine, Davis, on January 23, 29 and 30, 1960, was discussed. A general business meeting of the Board will be held January 27 in Sacramento.

Three licensed veterinarians were called before the Board for violation of Sect. 4882(d) of the Act, which reads: 4882. The Board may revoke or suspend a certificate for any of the following causes: (d) For having professional connection with or lending one's name to any illegal practitioner of Veterinary Medicine and the various branches thereof.

According to the Board, this section of the law does in effect exist and is being enforced very strongly, along with other sections of the Practice Act.

*Presented at the CVMA Convention, Santa Monica, June 21-23, 1959.

Brucellosis in Man*

Moderator: CHARLES M. CARPENTER.

Panel: HUGH S. CAMERON, ROBERT D. COURTER, JOSEPH L. BRIGGS.†

You are controlling Brucellosis. You know what you are doing to Brucellosis but do you know what Brucellosis is doing to you? Particularly to those who have been exposed to the infection or have been sensitized. There is a general idea that Brucellosis is well controlled and that it is no problem for man or animals these days but I think that we are not taking the right attitude because there is far more Brucellosis and morbidity from Brucellosis in man and animals than we suspect.

From the time that Brucellosis was discovered in the U.S. until about 1925 when we began to recognize acute cases of Brucellosis in this country and until the antibiotic era we saw many patients with the typical undulant fever. These days we don't see so many acute cases of Brucellosis because the minute some patient has a fever the doctor usually injects him with an antibiotic which eliminates the febrile aspect of the disease but doesn't cure the patient. It perhaps cures him of his acute symptoms but he has become infected and sensitized and may have recurrences and a series of events which I will discuss later.

Hugh S. Cameron: Brucellosis is an occupational disease found principally in packing house workers. Veterinarians are exposed to the disease through contact with diseased animals and by inadvertently vaccinating themselves instead of the calf. We have swine Brucellosis in packing house workers with a high incidence in those areas handling high percentages of pork. The goat problem is not a problem in California. To date we have not encountered *melitensis* or any of the species of the genus *Brucella* in California goats. We have isolated *Br. melitensis* in California from cases of human Brucellosis but those were infections which had been picked up elsewhere. *Br. melitensis* is isolated from swine, not in California but in the midwest, particularly in Iowa from swine that have aborted.

As far as the producer of livestock and the dairyman is concerned, we could forget about Brucellosis because it is not the economic

problem to the livestock raiser that it was prior to the development of Strain 19 vaccine. Today it is a public health or public relations problem because when people think of undulant fever or Brucellosis they immediately think of dairy products. I believe that statistics show that a relatively small percentage of human Brucellosis can be traced directly to dairy products. A high percentage of our dairy products today are pasteurized although we still have plenty of raw milk and there is no regulation in our state which will prohibit the sale of raw milk from herds infected with Brucellosis. There are local ordinances but no state regulation pertaining to that.

I would estimate, on the basis of examining a considerable number of animals, that approximately 3% of the lactating cows in California are shedding *Brucella* organisms in the milk. The majority of that milk is pasteurized and we have yet to find *Brucella* in pasteurized milk although we can readily culture *Brucella* from the milk in the raw state. This brings up the problem of allergy. When you have pasteurized *Brucella* it may still cause some reaction in the person who has been sensitized to the *Brucella* protein.

Vaccination has been responsible for bringing the disease in cattle under control. As a result we have relatively few acute epidemics of Brucellosis in cattle. Of course, the livestock owner is under the impression that the vaccine has taken care of the entire problem. The vaccine will prevent the animal from aborting. This is the principal function of the vaccine. It will not prevent the animal from picking up the infection and being a carrier of infection even though it may show no clinical symptoms of infection.

What about the future of vaccination? This question has sometimes been asked by livestock people. When we complete this eradication program, which we probably won't do in our time, then what is going to happen to vaccination? It is my personal opinion that we probably will need more vaccination. It is difficult to conceive that a single vaccination of a calf at 4, 6, 8 months or even later will provide lifelong immunity. I doubt that that will happen so we need more information on the immunity provided by Strain 19. Of course when we start giving booster shots these animals are going to be reactors to the blood test which means that under the present conditions the booster vaccination is out.

We have been conducting a pilot research program in Marin county using the Whey Test to eradicate infection. In this county we have tested the herds first with the Ring Test which is the composite herd test. Then if

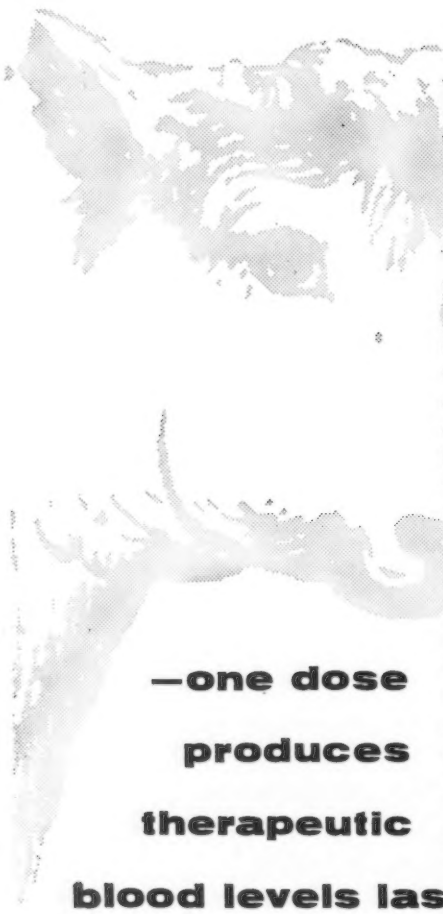
(Continued on page 40)

*Presented at the CVMA Convention, Santa Monica, June 21-23, 1959.

†Charles M. Carpenter, M.D.; D.V.M.; Dept. of Inf. Diseases, U.C. Med. Center, L.A. Hugh S. Cameron, D.V.M.; M.S.; Ph.D. Professor of Veterinary Science, U. of C., Davis. Robert D. Courter, D.V.M.; Assistant Chief, Communicable Disease Center, P.H.S., Atlanta. Joseph L. Briggs, D.V.M.; Jessup Farms, Glendale.

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More than any other professional man, the practicing veterinarian knows that his most valuable asset is time. In any area of his practice, the success of his therapy cannot be measured by results alone; he is a busy man whose time must be used judiciously.

Well aware of this problem, Merck research workers have designed an antibacterial agent which, from its conception, was meant to satisfy the particular needs of the veterinarian. In cattle, this new drug produces effective therapeutic blood levels for at least two days, freeing the veterinarian from time-consuming return calls and minimizing stress-producing handling.

The most exciting development in sulfa therapy in 20 years

SULFABROM gives you all the benefits of sulfa efficacy and at the same time helps eliminate the necessity for frequent administration. Thus, SULFABROM is economical—your initial expenditure is sulfa-low and decreased total dosage brings cost down even lower.

SULFABROM, administered orally or

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produces
therapeutic**

**blood levels lasting up to 48 hours
in cattle**

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Concept in sulfonamide therapy

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intraperitoneally to cattle, produces effective blood levels lasting up to 48 hours—frequently long enough to eliminate *any* repetition of dosage.

SULFABROM—quickly absorbed, slowly excreted

Although SULFABROM is notable for producing effective levels in rapid time, once it has entered the blood stream its speed of action slows down considerably. SULFABROM is excreted very slowly; this accounts for its long-lasting effect. In cattle, detectable amounts may be present in the urine for as long as six days. Blood levels remain high, sometimes for as long as 53 to 60 hours. And, because it is excreted so slowly, seldom is the amount of SULFABROM passing through the urinary tract ever large enough to cause crystalluria.

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By maintaining a high sulfonamide level in the tissues, SULFABROM minimizes the emergence of resistant strains of most pathogens. SULFABROM exerts its antibacterial effect at the cellular level long

enough to combat effectively both gram-negative and gram-positive organisms including those responsible for:

calf diphtheria "recovery in 48 hours";
acute septic mastitis "uneventful recovery";

metritis "back on feed and eating normally" in two days;

foot rot "in 48 hours the cow was able to stand and started to eat";

pneumonia "in five days' time this calf was back to normal";¹

as well as *scours*, winter dysentery, *coccidiosis*, *shipping fever*, *listerellosis* and *miscellaneous infectious conditions*, such as *peritonitis* and *infected wounds*.

SULFABROM—single-dose sulfa therapy available exclusively to veterinarians

In sum, SULFABROM represents the very latest advance in sulfa therapy. Effective against a full range of infectious diseases, economical to use by any standards, SULFABROM is your answer to the pressing problem of repeat calls and handling time in the treatment of almost any infection.

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SULFABROM 15 Gm. Boluses—packages of 5 and 50

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VETERINARY

1. CASE REPORTS IN MERCK & CO., INC. FILES.

Brucellosis in Man

(Continued from page 37)

the herd is suspicious to the Ring Test we Whey Test each individual animal instead of blood testing. Of course we blood test the dry cows. This was started in April of 1957 and in October 1958 Marin county was declared a Modified Certified Brucellosis Free Area.

The same program is now being carried out in Sonoma County but modified in that all animals positive to the Whey Test are confirmed by means of the blood test before being removed from their herds.

One distinct advantage of the Whey Test is to determine which of the animals reacting suspicious to the blood test are infected. If they are infected the organism will be present in the mammary gland and the animal will react to the Whey Test. Another advantage of the Whey Test is that it will distinguish between the reaction caused by the vaccine and that caused by virulent infection. The reaction caused by the vaccine will not persist in the mammary gland.

It seems to me that we are becoming somewhat complacent with respect to Brucellosis. It is not a closed issue. We could very well get into the state of mind that we are with tuberculosis. I do not believe that there is an experiment station in the United States today that is doing anything on bovine tuberculosis. A program was adopted and research discontinued with the result that tuberculosis is still a problem today. If we discontinue research on Brucellosis the very same thing could happen.

Robert D. Courter: (Dr. Courter supplemented his talk with slides.) This is a brief résumé of what is happening to Brucellosis among humans. According to the records we had a peak of human reported cases in 1947 in which there were nearly 7,000 cases. It has continued to drop as the program for controlling the disease in cattle has progressed. In 1958 there were 802 cases.

The disease is still highly persistent in the cattle and swine raising states. The number of cases reported in the United States is proportional to the number of cattle and swine in each state.

Nearly 300 of the 802 cases in 1958 were rural and nearly 200 were urban. The highest incidence was found in packing plant employees working on the line handling the carcasses and meat. The next highest group was the livestock farmer. The incidence here seems highest in the 30 to 40 year old group. The third group was housewives with twice as many in rural areas as in urban. Perhaps this is because they help their husbands in the barn and with the livestock.

Joseph L. Briggs: I had a very strenuous bout with *Brucella* last spring and have had the disease for 10 years. My case is rather typical of all the veterinarians that I know who have had the disease. Since being introduced to Dr. Carpenter he has taken an interest in my case and has done more than anyone has attempted to do or has had the knowledge to do. 70% of the large animal practitioners at a convention in Colorado were found to be running a high titer to *Brucella*. Age grouping runs into this with the greatest incidence in those out of school from 8 to 10 years. None of these had received successful treatment. This was prior to the development of the tetracyclines.

With this disease you are not sick enough to go to bed, you just mope around and everyone calls you a bum because you are lazy and actually it isn't entirely your fault.

I found that the serum test is only accurate during a certain phase of the disease. You start with acute Brucellosis, carrying no titer, then your titer is present for three to four months before declining to negative or very low. You have to be fortunate in your timing to get a test and if you go into any general clinic except UCLA and they run an agglutination test it will probably be negative and they won't be able to diagnose the condition. You have probably already been through a bout with the broad spectrum antibiotics and had gotten temporary relief but they just drive the disease deeper into your system.

I know men who have carried negative serum titers for periods of 8 to 10 years and who suffer from the disease every spring. I believe that if they were given the intradermic test for allergic response to the disease they would find they were suffering from a very chronic form of Brucellosis. I also believe that the same is true with cattle and am beginning to doubt that the blood test is the final answer. The Whey Test is also something that is needed to find out if cattle actually have the disease or whether you are getting a false positive or false negative.

You probably initially contact the disease from cows with retained placenta, from milk samples, or from handling cattle. Your serum titer declines and you think you are getting over it. From then on you are careful but keep getting these attacks.

We have certified milk. Our cows are bled every 60 days and there is almost no chance of an animal contacting the disease and being a shedder in the milk between these tests. We have never had an animal come up positive in the twelve years we have been testing.

The majority of your grade B milk products go into manufactured dairy products such as cottage cheese, American cheese and process cheese. It is true, these are all pasteurized products but they also are almost entirely

from *Brucella* infected animals because the dairyman who can't produce grade A milk is generally not being careful with his herd and is producing grade B milk and selling it to a cheese manufacturer. They pasteurize it, killing whatever *Brucella* that is present, but still the veterinarian who is on the receiving end of the thing develops the typical symptoms of the disease as an allergic manifestation of the *Brucella* proteins which are in this processed milk product.

If you have the disease, or have had it, and can stay away from pasteurized milk products the chances of your symptoms returning are low if you stay away from the aerosol vaccination and don't inadvertently vaccinate yourself.

Dr. Carpenter: I'm sure that you all appreciate the fact that when you take live *Brucella* into your body the infection gets into your intestinal tract and into the blood stream. Then the organisms localize in the perivascular tissue just outside the blood vessel causing little granulomatous lesions. If this granuloma localizes just beneath the lining of the blood vessel the reaction is outside the vessel and it has a tendency to constrict that vessel. If it is just within the lining of the vessel it grows up into the lumen and occludes the vessel. In our concept at the present time, we

think that the perivascular location is very significant. The lesions may locate in the blood vessels of the heart, brain, mesentery, kidney or in the joints and may strike in one individual in one tissue and other sites in someone else. We don't know why. This is part of the basic process that goes on and during this development of these granulomatous lesions the host becomes sensitized.

By being sensitized you not only have these granulomatous lesions but you have a positive skin test. It is not just the skin that is sensitized but practically every cell in your body which is sensitized. We can see this local skin reaction but you must also realize that the other cells of the body are sensitive to *Brucella* protein and are also reacting to it.

In addition to this marked sensitization of the cells there is another interesting reaction to this chronic *Brucella* infection. Once you have become infected your blood serum is no longer bacteriocidal to the *Brucella* organism. In a normal person with a negative skin test his serum will kill the *Brucella* organism in vitro. However, if you have a positive skin test your serum does not kill the bacteria in vitro. We use this test in many instances to determine the degree to which your serum has lost its bacteriocidal activity. This may play an important factor in recurrences of *Brucella* infection. If your serum is not bacteriocidal

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5. Contracted Liability.

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B. Loss to dog by fire, maximum \$1,000 per dog, \$25,000 aggregate.*

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A. Protects insured if employees use own car for business purposes.
B. Automobile-hired, etc.

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A. Cover the insured for his personal act, and that of his family, services of part-time domestic employees, etc.

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CVMA
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for *Brucella* and you get some live bacteria in it they are not cleared out of the system as rapidly as you would find in the case of a normal individual. We are not certain as to why this occurs. We know that if we take serum from a patient suffering from chronic Brucellosis and add complement to it the bacteriocidal activity is restored.

This is just the opposite of what we expect to find. You would think that if your serum had a high titer or antibodies that it would kill off *Brucella* better than serum with no antibodies.

Once you have a positive skin test you are sensitive to *Brucella* protein. You are allergic. In the case of these granulomatous diseases it is a delayed reaction. It takes 24 to 48 hours before these symptoms show up after you come into contact with the antigen.

I want to give you more proof of this allergy in chronic Brucellosis. We grow cells in tissue culture of many kinds of cells which we can isolate and examine. Now, say we isolate a strain of these cells from a sensitized host. It might be a guinea pig, a monkey or a man. We grow these in a test tube and if we add just a few dead *Brucella*, or a little Brucellerin, or a little *Brucella* protein these cells react. The sensitized cells get a cytotoxic effect from this *Brucella* protein and I'm certain that this same thing happens in the body just as it does in the test tube. When you get dead *Brucella* or *Brucella* protein or even live cells your cells react in this same cytotoxic way.

We've also shown in guinea pigs that if you infect one once with a live organism and keep them without reinfecting them for the rest of their lives that they will live longer than guinea pigs which are infected once and then subsequently reinfected with a live or dead organism. This sets forth this same principle. They have been sensitized and when you add more antigen to this sensitized host it interferes in a very slow chronic way with the health of the animal.

Now the third point is this. We have noticed that in veterinarians who are sensitive and have a positive skin test and remove a placenta from a cow that is infected they may get a marked reaction on the skin. If you who are sensitive stay away from this antigen you are not going to have any trouble. So, avoid contact with infected animals or *Brucella* antigen in one form or another.

It is very important that we see to it that our dairy products are free from this antigen. We have found in patients with cardiovascular disease that 50% of these people have positive skin tests for *Brucella*. I am sure that if we kept antigen away from those they would

repair this damage and live much longer than they will by getting *Brucella* antigen in dairy products.

Brucellosis is a very unique disease because we know of no other disease in which the antigen is in the food. In this case, the dairy products. In the old days when we had tuberculosis, we found the tubercle bacillus in milk, butter, cheese and so on but that is pretty well eliminated and the only way now if you have a positive tuberculin test to get more antigen is from another human case. You don't get many bacteria from a human case unless you are living pretty close to it so you avoid a lot of these reactions from the antigen. But, in the case of Brucellosis the cream or fat brings up 60% of the bacteria in the milk and they are concentrated in the butter or cheese or other similar products.

In an allergy, the vascular system is the tissue of the body that reacts to this allergic manifestation. It is sensitized and whenever more antigen is introduced this antigen reacts in the vascular system.

Don't be misled with the seriousness of Brucellosis. In the United States it isn't as serious as it is in Mexico, in the Latin American countries, in Spain or in Italy, where they have goats and sheep as great sources of infection. In northern Spain, you could go to any hospital and see 40 to 50 cases of acute Brucellosis. Maybe everybody in a village had a positive skin test and there would be much chronic illness in these villages.

Equine Practitioners to Meet

The American Association of Equine Practitioners holds its 6th annual meeting at the LaSalle Hotel, Chicago, December 14-16. All doctors of veterinary medicine and students are invited to attend.

Featured banquet speaker will be AVMA president Dr. S. F. Scheidy. The American Association of Equine Practitioners is headed by Brig. Gen. Wayne O. Kester, former AVMA president and retired chief of the Air Force Veterinary Service.

Applicants

Norman Jay Green, San Francisco. Vouchers: Ernest A. Siegel, Edward C. Bland.

Duncan John McLean, Lancaster. Vouchers: William J. Zontine, Ralph A. Smith.

Nedon R. Christensen, Sierra Madre. Vouchers: N. L. McBride, K. R. Madill.

Joseph L. Geierman, San Bernardino. Vouchers: R. A. Brunson, Robert E. Philbrick.

Robert W. Disney, Walnut Creek. Vouchers: George H. Muller, William F. Riggs.

Dr. Jones, Southern California Veterinarian of Year



Mrs. Irish presents award to Dr. Jones. Dr. Howard Taylor, right.

Dr. Eugene C. Jones, veterinarian of Long Beach was named the Southern California Veterinarian of the Year at the Southern California Veterinary Medical Association Annual Meeting held on September 26 in Los Angeles.

Dr. Jones was selected over several nominees by a special committee composed of Mrs. Leiland Atherton Irish, Mr. Frank Bonelli, Chairman, Los Angeles County Board of Supervisors, Mr. Frank Pellisier, dairyman, Dr. Louis Bullock, President, California Medical Research Association and Mr. Les Wagner of the Mirror-News.

Dr. Jones' selection for this award was based upon his outstanding contribution both to his profession and his community. He was the first veterinarian to build and fully equip a small animal hospital in the Los Angeles area. He was also the first to perform cesarean sections on small animals and to use X-ray in diagnosis as well as maintaining a diagnostic laboratory in the hospital.

Dr. Jones is a charter member of the Rotary Club of West Hollywood, director of the Beverly Hills Building and Loan Association and director of Civil Defense for veterinarians in the Los Angeles area.

Besides being active in the local veterinary association, Dr. Jones is also active in the State and National associations and is a charter member of the American Animal Hospital Association. He is presently the hospital inspector in the Western States for the American Animal Hospital Association.

Col. Foster's 50-Year Milestones

Col. Robert J. Foster, U.S.A. (Ret.), can look back in his colorful career which included the presidency of the AVMA and as Chief, Army Veterinary Corps, to several momentous half-century anniversaries.

First, in 1952, Col. Foster attended his fiftieth class reunion at Cornell. Then in 1956 he celebrated his fiftieth year of membership in the AVMA. It was in that year he received the AVMA's award for distinguished service to the veterinary profession.



COL. ROBERT J. FOSTER

In 1958, Colonel and Mrs. Foster attended his wife's fiftieth class reunion at the University of Missouri. This year, 1959, marked two milestones: The Foster's fiftieth wedding anniversary, and on July 6, fifty years ago, the Fosters sailed as bride and groom on the U.S.A.T. Thomas, from San Francisco to the Philippine Islands.

His many friends in the CVMA say: "Congratulations, Colonel!"

OUT-OF-STATE NEWS

NEVADA

The annual winter meeting of the Nevada State VMA will be held at the Riverside Hotel, Reno, January 11 and 12, 1960.

COLORADO

The 21st annual conference for veterinarians will be held at The Glover Veterinary Hospital, College of Veterinary Medicine, Colorado State University, February 15-17, 1960. A short course in bull evaluation will be held February 13 and 14.

OREGON

The Oregon Veterinary Medical Association will host the Pacific Northwest Veterinary Associations Conference, February 4-6, 1960, in Portland.

Speakers will include Dr. Samuel Scheidy; Dr. Rue Jensen; Dr. J. A. Archibald; Dr. Herb G. Stoenner; Dean E. C. Stone and Dr. Werner Heuschele.

Acanthosis Nigricans in Small Animals*

AUSTIN TAYLOR, *Jensen-Salsbery Laboratories, Inc.*

Acanthosis nigricans was first described in the human literature about 1890. It was characterized by surface skin lesions and internal cancer. The disease is now described as a benign condition specifically localized with hypertrophy of the papillary layer and increase in its pigmentation.

In the human the lesions are preferentially localized in the groin, anal-genital region, and the nipples in about that order of appearance. On occasion the mucous membranes may be affected.

There are about 500 cases of acanthosis nigricans reported in the human literature. Most of these are associated with neoplastic lesions of some sort. Generally in the internal organs. It has been observed that when the tumor has been surgically removed that most of the acanthotic lesions clear up. However, they reappear with the reappearance of the malignancy.

A second form of acanthosis nigricans appears quite frequently and has been associated with puberty.

There have also been described certain acanthotic conditions which are peculiar to the obese and to negroid people. These are sometimes called pseudo acanthosis nigricans. In this condition there seems to be no correlation with a tumor.

Acanthosis was first described as a clinical and pathological condition in the canine in 1909. The typical localization, the symmetrical occurrence of the lesions and the histological picture with hypertrophy of the papillary layer and hyperkeratosis are similar to the features of the human condition. A striking difference exists, however, in the conditions. Very few of the canine cases are associated with malignancy. It has been reported occasionally. Primarily with cancer of the thyroid and certain internal malignancies.

There has been no generally accepted explanation as to etiology. Since many forms occur at puberty it has been postulated to be concerned with some sort of hormone imbalance. Following this line of thought many cases were treated with hormonal products. Some cases of success were reported although no definite conclusions were adopted.

In 1949 it was reported that with canine acanthosis there was always a lowered metabolism caused by a hypofunction of the thyroid gland. Some outstanding successes were reported with therapy directed at the correction of the hypofunction of the thyroid. This offered a clue to both the etiology and the therapeutic approach to this stubborn condition.

In 1953 an advanced atrophy of the thyroid was found in one case of acanthosis nigricans. It was later discovered that dogs with low uptake of radioactive iodine often had various dermatoses among which were some cases of acanthosis nigricans.

To summarize then it may be said that benign forms of acanthosis in humans and dogs may reasonably be expected to have some sort of endocrine etiology.

Dr. Steg Bornthors in Sweden has recently published a very complete piece of investigational work dealing with the etiology of this condition. There is no time in an animal's life at which he is more susceptible than at any other. This condition occurs about as frequently in the male as the female. In Sweden it appeared about 200 times as frequently in the Dachshund as in all other species.

The next step in this investigation was to study the activity of the thyroid gland in these dogs. Normal dogs have a 24 hour I^{131} uptake of about 52% whereas normal Dachy's have a 24-hour I^{131} uptake of about 55.9%. The I^{131} uptake in dogs with clinical acanthosis nigricans was 25.4% indicating a drastically reduced thyroidal activity. The next logical step was to reproduce this condition by thyroid function reduction. This was done with methyl thiouracil. During a 9 month period of administration of the drug there was no indication of skin lesions in the dogs although the thyroid I^{131} uptake was reduced to 3% in one dog and 6% in the other dog used. They didn't gain weight and their appetite remained good. As a result it was concluded that a low level of thyroid activity was generally associated with but not necessarily the cause of acanthosis nigricans.

It then became necessary to study the pituitary gland and in particular the thyroid stimulating hormone. Ten cases were treated with injections of TSH. Two international units were administered daily for 5 days with marked improvement in all lesions of acanthosis. These results were accepted as indicating one of three things:

1. The TSH has some extraneous material which was beneficially affecting the condition.
2. TSH itself, per se, had the beneficial affect on the lesion.
3. The thyroid contained enough hormone for normal skin function.

Total thyroidectomy was then tried. This causes a major increase in the secretion of TSH from the pituitary. In the three dogs so treated the skin lesions improved greatly

(Continued on page 48)

*Presented at the CVMA Convention, Santa Monica, June 21-23, 1959.

FROM OUR ADVERTISERS

A \$1,500,000 tissue culture center, to be built at the Pitman-Moore Company biological laboratories near Zionsville, was announced by Kenneth F. Valentine, president of the company.

Because of special features, many of which are based on recommendations by outstanding scientists and new requirements of the U. S. Public Health Service, it will be the first of its kind in the country.

Mr. Valentine said that it will house the development and production of biological products utilizing the tissue culture method.

Although the procedure has been a research "tool" for several years, one of the first and most outstanding utilizations of tissue culture was Salk polio vaccine in which virus for production is grown on monkey kidney tissue.

Pitman-Moore Company, a major supplier of Salk polio vaccine, is now producing the largest line of tissue culture products in the biological and pharmaceutical industry with three already on the market and several in the clinical evaluation stage.

* * *

The first ready-to-use parenteral form of the broad-spectrum antibiotic Terramycin has been introduced by Pfizer Laboratories, division of Chas. Pfizer & Co., Inc.

Terramycin Intramuscular Solution is a new formulation containing oxytetracycline and the local anesthetic lidocaine in a stabilized liquid medium. Packaged in convenient ampule form for immediate use, it makes possible prolonged serum levels of broad-spectrum antibiotic activity with a marked reduction in the local discomfort commonly encountered in tetracycline intramuscular therapy according to William C. Spring, Jr., M.D., medical director of Pfizer Laboratories.

* * *

A rambunctious leopard, weighing between 50 and 60 pounds, was captured recently with the aid of the potent tranquilizer, Wyeth Sparine (promazine), after she had cavorted for more than 20 hours about the Glen Oak park zoo in Peoria, Ill.

When the leopard was finally spotted, it was shot with a dose and a half of Sparine from a cap-chur gun. When the feline was quieted, the darts were removed and penicillin administered to prevent infection. At last reports, the leopard and zoo staff were doing nicely!

* * *

Norden Laboratories, manufacturer of veterinary pharmaceuticals and biologicals, plans to merge with Smith Kline & French Laboratories, for many years a leader in the development and production of high quality pharmaceuticals for the medical profession.

In making the announcement, Dr. E. C.

Gen. McNellis Heads Army Veterinary Corps

Russell McNellis, VC, new Chief of the Army Veterinary Corps, has been appointed to the rank of Brigadier General, the Army Surgeon General's Office recently announced.



GEN. RUSSELL MCNELNIS

The new General is the 12th officer and the 4th general officer to serve as Chief of that Corps.

General McNellis was born in Dunkerton, Iowa, in 1906. He graduated from Iowa State College, Ames, Iowa,

in 1928 with a Doctor of Veterinary Medicine degree. The General has also graduated from several Army schools and has served at various stations in the United States and overseas.

From 1942-1947, General McNellis was Assistant Chief of the U. S. Military Mission to Lima, Peru, where he was concerned with the organization of a Peruvian National Veterinary College and a Peruvian Remount Service.

Card Index for AVMA Journal

Busy veterinarians are frequently in need of a suitable index to articles, case histories and references to material which appears in the AVMA Journal.

The only answer is a card index system whereby each article is listed and filed where it can be located immediately. An enterprising veterinarian has come up with a solution, and if a sufficient number of veterinarians would subscribe to such a service it could be made available for \$6.00 per year. This includes all the articles in the AVMA Journal for one year, and the cards prepared in such a manner that a receptionist would have no difficulty filing them.

If you are interested in obtaining such a service, write to Dr. V. D. Stauffer, 5500 Wadsworth, Arvada, Colo.

Jones, president and chairman of the board of Norden Laboratories, said the merger, subject to approval of the stockholders, is complete except for final audit and closing details. Acquisition of Norden Laboratories will give Smith Kline & French, with its vast research, development and production facilities, entrance into the animal health field through this long-established veterinary firm.

LOCAL ASSOCIATION NEWS

Alameda - Contra Costa VMA

President George Muller presented the Alameda County Health Department with a \$500 collection of books on animal diseases. This excellent piece of public relations was well reported by the *Oakland Tribune*. On November 18 the group was addressed by Mr. Bert Stewart, general manager of the National Automobile Club of California. He spoke on public relations.

* * *

Bay Counties VMA

A gala Ladies Night and Installation was held in the Claremont Hotel, Berkeley. The affair attracted many veterinarians and their wives from the five constituent associations in the Bay Area. After dinner there was dancing to Del Courtney's 5-piece orchestra.

* * *

Southern California VMA

Recent speakers at SCVMA and Chapter meetings were: Dr. Walter Stiern, State Senator from Bakersfield, who addressed the association's annual business meeting in the Mayfair Hotel, September 1. Dr. Harlan E. Jensen, of La Jolla, spoke at the joint Southeast and San Gabriel chapters, October 14.

Dr. Herbert Ott gave a Veterans' Day talk, November 11, at the Southeast Chapter meeting on "Personal Account of Bataan Death March." Mr. Kenneth Humphreys, executive secretary, CVMA, spoke on state association and AVMA affairs and the new house of delegates. On the day before, Mr. Humphreys spoke at the Large Animal Chapter in Los Angeles. Dr. Robert M. Cello, Davis, was guest speaker at the SCVMA quarterly meeting, November 18.

* * *

Orange Belt VMA

Dr. Jay H. Bouton was awarded life membership in the Orange Belt VMA at their meeting November 9 in San Bernardino. Mr. Humphreys also addressed the group on state and AVMA association affairs and the house of delegates.

* * *

Santa Barbara - Ventura VMA

At the November 4 meeting held in the Pierpoint Inn, Ventura, Mr. Humphreys spoke on state and national association affairs and the house of delegates.

OPPORTUNITIES

For Sale

The following items are for sale by Dr. B. I. Bearint, 101 S. Magnolia Ave., Millbrae, Calif. (1) 60 cages, 19x20x28 inches; 3/4-inch waterproof plywood, formica lined. (2) X-ray, Universal; portable, 20 amp., 80 K.V., new, plus accessories. (3) Autoclave, Castle; small. (4) Tables, surgical, tilt-top, formica top; chrome pedestal. (5) Microscope, Zeiss. (6) Oster, small animal clipper and blades.

* * *

General Electric portable X-ray machine with stand and suitcase for carrying. 15 M.A., 3 cassettes with new screens, film hangers, X-ray viewer, lead gloves and new tank, never connected. Also new model Zeiss binocular microscope and case with built-in sub-stage illuminator and mechanical stage. Has quick change turret head for photo-microscopy or camera lucida. Nose piece has 4 lenses from scanning low to oil immersion. Used only 3 months. Your chance to obtain like-new equipment at great savings. Also Welch-Allen ophthalmoscope-otoscope. Have left practice. Phone LA 4-4129, El Cerrito.

* * *

Practice for Sale

Central Coast area, California. Small animal hospital in fast growing area; large animal hospital opportunities if desired. Includes modern 3-bedroom home; excellent climate; liberal terms if desired. Box A-88, THE CALIFORNIA VETERINARIAN.

* * *

Mixed practice in Central California, mainly dairy and small animal. Ranch style home, hospital and acreage. W. W. Williamson, D.V.M., No. Highway 99 and Grove Ave., Atwater. EL 8-4469.

Kern County VMA

On November 5 the Kern County VMA met at the Chicken House, Bakersfield. Mr. Humphreys addressed the meeting.

* * *

Tulare County VMA

The Tulare VMA met on November 12 at the Taugus Ranch. Mr. Humphreys concluded his swing through the southern part of the state by addressing the group on state and AVMA affairs and the house of delegates, which meets for the first time at the Midwinter Conference.

OPPORTUNITIES

Veterinarian Wanted

Experienced veterinarian wanted by firm with large dairy herd. Permanent position. Salary open. Write qualifications to Box A-86, THE CALIFORNIA VETERINARIAN.

* * *

Man with California license wanted for small animal work, full time. Phone Dr. Joseph Brown, Cupertino, ALpine 2-6380.

* * *

Veterinarian wanted for dairy and small animal practice in L. A. County. Experience in dairy practice necessary. Write C. H. Ozanian, D.V.M., 10326 E. Artesia, Bellflower, Calif.

* * *

Veterinarian wanted for large and mixed practice. Stockton area. Excellent opportunity. Phone HO 4-4521.

* * *

Full time veterinarian wanted. Small animal. Excellent opportunity. S. F. peninsula area. Write Box A-81, THE CALIFORNIA VETERINARIAN.

* * *

Position Wanted

Responsible, experienced small animal practitioner desires association with leading hospital, preferably with opportunity for future lease, purchase or sharing. Write or phone Richard A. Shea, D.V.M., 1506 Vivian Lane, Newport Beach, Calif., LIBerty 8-7489.

* * *

Available, relief work. Experienced; Calif. license. Dr. J. G. Blue, 2121 East 2nd St., Tucson, Ariz. Phone East 5-1685.

* * *

Hospital for Lease

Small animal hospital in California or Arizona. Purchase considered, or lease. 9 years' exp. Write Box A-89, THE CALIFORNIA VETERINARIAN.

* * *

Hospital for Sale

Modern, 3-year-old, well equipped small animal hospital in East Bay (Oakland area). Ideal location. \$15,000 down will handle. Total price, \$65,000. Grosses better than \$30,000 annually past three years. Write Box A-90, THE CALIFORNIA VETERINARIAN.

Dr. C. E. Cornelius, Davis, has received a \$31,000 grant from the National Institutes of Health to continue his study of how kidney and bladder stones are formed in sheep and cattle.

In Memoriam

DR. JOSEPH D. COZZENS

Dr. Joseph D. Cozzens, long-time member of the CVMA, passed away October 15, 1959. He suffered a heart attack while duck hunting in North Dakota. Dr. Cozzens was born in 1896. He attended Colorado State University from 1922 to 1924, and Ohio State University from 1924 to 1926, where he received his degree in veterinary medicine.

Since his retirement from practice in Santa Monica, Dr. Cozzens resided in Big Bear Lake. He was active in the Masonic order and the Shrine, and a member of the AVMA. Dr. Cozzens leaves a wife, Helen, and two children.

* * *

DR. WILLIAM H. BOYNTON

Dr. William H. Boynton, Life Member of the California Veterinary Medical Association, passed away on November 10 at the age of 78 after a brief illness. A graduate of Cornell, 1908, Dr. Boynton was emeritus professor of veterinary science at the University of California, Berkeley. He retired from the faculty in 1949, after 25 years of service; he continued, however, to carry on research and to consult with instructors and students. A resident of Berkeley, Dr. Boynton leaves a wife, Ethel, a daughter, brother and two grandchildren.

College Conducts Course in Disease of Livestock

A pilot course for the state in livestock diseases and management has been inaugurated at Bakersfield College under the joint auspices of the Kern County Veterinary Medical Association, the University of California, Kern County Farm and Home Advisors Office, and the evening division of the college agriculture department.

Enrollees to date have encompassed several categories of general farming, including teachers of agriculture, extension service personnel, livestock growers and feed lot managers, students, veterinarians, and even a few housewives.

The remaining lecture schedule follows:

Tuesday, Dec. 15—Poisonous Plants Identification; Roy Parker, Kern County Extension Service; Livestock Symptoms and Treatment of Plant Poisoning to be given by Dr. James Frederickson, Bakersfield.

Tuesday, Jan. 5—Care of Working Dogs; Dr. Richard Stiern and Dr. Bruce Watson of Bakersfield.

Tuesday, Jan. 12—Round Table on Miscellaneous Diseases; Roy Parker, Dr. Dick Willis, Taft; Dr. Walter Stiern, Dr. Dickson, Dr. Charles Burger, Dr. Al Tietze and Dr. Peacock, all of Bakersfield.

Acanthosis Nigricans in Small Animals

(Continued from page 44)

until they were practically healed about one week after the operation. The rapidity of healing closely resembled that seen following the administration of TSH. One week after the operation the skin of the affected portions was smooth with normal thickness and almost normal pigmentation. The hair growth had begun in the affected areas by the end of the second week. No changes in the general condition of the dogs were observed during the entire period. At this point it became quite obvious that the hormone having a beneficial effect on the lesions of acanthosis was actually TSH from the anterior pituitary. As conclusive proof of this hypothesis, Bornthors used TSH as the sole therapy in about 50 cases. From 1 to 2 international units of TSH were injected subcutaneously for 5 days. This generally resulted in complete healing after 2 to 3 weeks of treatment. In a few cases the improvement was not seen. He also observed that there were more relapses than he would like to have seen.

Bornthors' recommendations for treatment were the subcutaneous injection of 1 international unit of TSH for 5 days and simul-

taneously administer tablets containing 0.2 gm of thiouracil twice daily. Thiouracil is continued for several months. It may be given orally for long periods of time without adverse effects.

At Jen Sal we studied the occurrence in the United States. The highest incidence was found in the Dachy. It also was seen in many of the long haired breeds although very few cases were studied. In treating we used a lyophilized TSH.

Roughly 70% of those treated showed a normalizing of the skin with the skin returning to a normal appearance in about 50%. In about 35% of the cases the hair coat will grow over the denuded areas. We consider this a satisfactory response to a hormonal product in a disease in which previous therapy was almost totally unsatisfactory. Dermothysin was recommended therefore to be used in other cases of dermatitis. Excellent results were obtained in a case of hormonal alopecia in a horse with this product.

To summarize, we have presented some evidence to show that this preparation (TSH or Dermothysin) is a satisfactory treatment for acanthosis nigricans in all breeds in which the disease is found. There is also some evidence of its therapeutic efficacy in the treatment of other skin conditions.

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Laboratory Notes

(Continued from page 30)

(SGP-T) test, a test which measures the degree of liberation of this enzyme in hepatocellular necrosis.⁴ In dogs with hepatic fibrosis without active necrosis, BSP retention will be greater than 5 per cent at 30 minutes after injection, but the SGP-T activity will be within normal limits (10-40 Sigma-Frankel units). The significance of elevated SGP-T activities in various hepatic pathologies in the dog has been previously reviewed.⁴

Horse. The disappearance of BSP from the serum of a horse after its injection also appears to be an exponential process. A Bromsulphalein Clearance Test has recently been developed for the horse.⁵ In this test, 1 gram (20 ml of BSP solution*) is injected intravenously and the rate of BSP disappearance is measured from 2 serum samples taken between 5 and 12 minutes after injection. The 2 BSP concentrations (as measured by a spectrophotometer) are plotted on semilog paper and the half-time ($T_{1/2}$) is calculated, i.e., the time required for the serum concentration of BSP to be halved. The method for $T_{1/2}$ calculation is given in Fig. 1. The normal average $T_{1/2}$ value for the horse is 2.8 ± 0.5 minutes with a range between 2.0-3.7 minutes.⁵ Increased $T_{1/2}$ values are indicative of hepatic pathology.

The BSP clearance test has many advantages in large animals over the calculation of dye retention. They are: 1, the animal need not be weighed; 2, the exact quantity of dye is not critical; 3, the two plasma samples can be taken any time between 5 minutes and 12 minutes in the horse and 5 and 20 minutes in the cow; 4, the plasma volume may be measured as in the Evans blue (T-1824) technique; and 5, the influences of plasma volume and hepatic blood flow are assessable. A BSP

retention technique using a standard dose of 40 ml of the 5% BSP commercial solution has recently been proposed for the horse,⁶ but this method contains the classical disadvantages of any retention-type test involving a rapidly cleared substance.

Cow and Sheep. The BSP clearance technique as recommended in the horse is also of value in ruminants.^{7, 8} The average normal $T_{1/2}$ value for BSP removal in mature dairy cattle is 3.1 ± 0.6 minutes between 5-20 minutes after injection with a range between 2.5-4.1 minutes. Yearling feeder steers exhibit an average $T_{1/2}$ value of 4.5 ± 0.32 minutes. The longer $T_{1/2}$ values observed in yearling steers as compared to mature cattle may be attributable to age and developmental differences in gastrointestinal mass and its effects upon portal blood flow.⁷ Cattle with hepatic fibrosis from fascioliasis, multiple liver abscesses, and acute suppurative hepatitis exhibit prolonged $T_{1/2}$ values for BSP clearance due to dye retention by the liver.

Because of the extremely rapid clearance of BSP in sheep, the two plasma samples for the calculation of the $T_{1/2}$ should be obtained between 3 and 7 minutes after injection.⁸ The normal $T_{1/2}$ value for BSP plasma disappearance is 2.0 ± 0.3 minutes. The major disadvantage of the dye clearance technique in sheep is that sampling must be performed quite rapidly since BSP disappears exponentially from the serum for an average of only 7 minutes after dye injection. The calculation of the percentage of dye retention of BSP at 10 minutes may be preferable in the sheep as in the dog. The percentage retention of BSP in the serum of normal sheep at 10 minutes after its injection was 6 ± 2 per cent at both the 2 and 5 mg BSP/Kg of body wt. levels.

The BSP retention test in dogs and the BSP clearance test in horses and cattle have each proven to be quite effective as aids in the diagnoses of latent hepatic pathologies in the respective species.

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